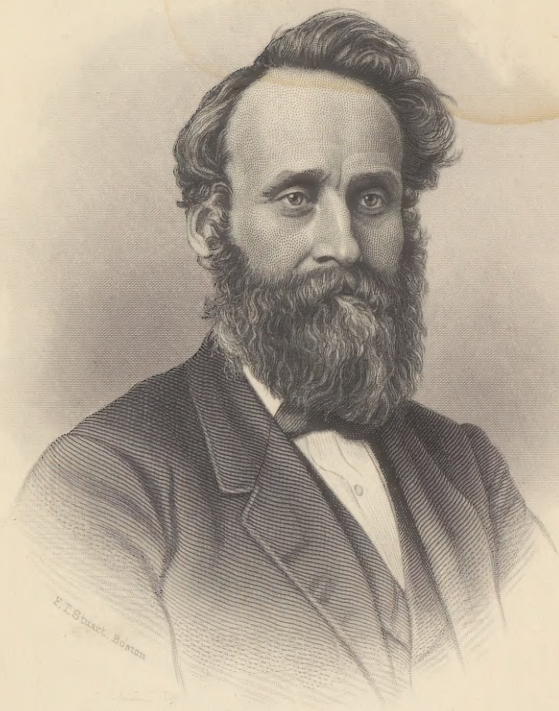


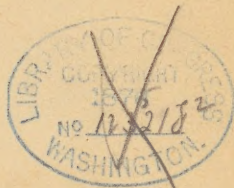
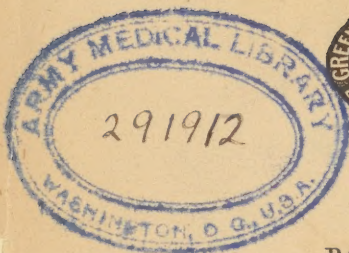


Yours Truly
R Greene

THE
PROBLEM OF HEALTH:
HOW TO SOLVE IT.

BY

REUBEN GREENE, M. D.



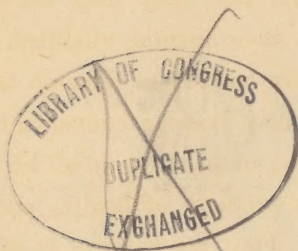
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PREFACE.

IN offering this work to the public, we make no other apology for its shortcomings, or lack of literary merit, than that it was written in the hurry of business, and in constant practice of our profession.

It is not designed as a work of literary art, but rather to enlighten the people in all that pertains to their general well being ; to instruct them in regard to the laws of life, that they may maintain good health ; to educate their mental qualities, that they may be intellectually sound ; to develop their moral natures, that they may become conversant with the higher duties of life ; in short, to do all in our power to solve the great problem of health, and promote human happiness. This, we believe, is of infinitely more importance to mankind than abstract theories, though presented in fine-drawn sentences or well-rounded periods.

We have no hobby to ride, no pet theory to expound ; simply the natural laws of health, as brought to view by thirty years of experience and practical

observation. The operation of these laws, and the effects of their violation, we have endeavored to express in plain, straightforward, and unvarnished language, using words to express ideas and illustrate principles, and not to please evil-doers or cover up the errors of society.

If we have seemed to deal harshly with many of the practices of the present day, it must be credited to our hatred of wrong, and not to a less worthy motive; for we believe that if the right merits our thorough approbation, no less does the wrong deserve our strenuous condemnation.

Without further remarks we submit the following pages to the candid consideration of a thoughtful and intelligent people.

REUBEN GREENE, M. D.

NO. 34 TEMPLE PLACE,
BOSTON, MASS.

PREFACE TO SECOND EDITION.

THE flattering reception and commendation of press and public given to our volume have induced the publication of a second edition. We attribute the success of this work to the fact that we have made it eminently practical, omitting all classic and technical terms, and presenting the subjects discussed in such a manner as to be within the comprehension of all. There exists among the masses a strong desire for practical knowledge; and the prevailing ignorance upon scientific subjects is, to a great extent, the result of placing the higher educational interests in the hands of men who are not practical, and who do not appreciate the wants or necessities of the common people. Books upon scientific subjects have been propounded in the closet, and not from practical life, and written in a manner and style too obscure to be understood or comprehended by the common mind. This has been especially true in regard to books on medicine and hygiene, as if phy-

sicians were afraid that a general knowledge upon these subjects would injure the interests of the profession. Knowledge is power; and it would seem that men of science have ever been disposed to use the power thus acquired to control the minds and fortunes of others; and, even in this enlightened age, men of learning do not seem willing that the masses should share the benefits of their study and research. This feeling of exclusiveness may be traced back to the remotest period. In the middle ages, the feudal lords, as well as the ignorant masses, were controlled by the learned monks; and the world has been slow to realize that there can be no great benefit from scientific research, no great progress in practical science, while it does not enlighten the common mind. In this country, where all classes pay tribute to the higher grades of scientific intelligence, where the very spirit of our institutions and government, and freedom itself, depend upon the general diffusion of intelligence among the people, it must be admitted, that such knowledge is not made sufficiently practical to be comprehended by the masses; and it is often and justly a reproach to theoretical science, that it adds little or nothing to the economy of practical life.

R. G.

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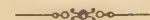
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THE PROBLEM OF HEALTH.



CHAPTER I.

THE PROBLEM OF HEALTH.

THE great problem of health has never yet been solved. For more than six thousand years the human race has existed on the earth ; many wonders have been discovered in earth and sea ; the arts and sciences have been advanced, if not perfected ; the human mind has grasped the heavens, weighed and numbered the stars, annihilated time and space ; and yet the problem of how to take care of our own bodies is still involved in mystery.

It might be a pleasing task to study human nature as it came from its Maker, a thing of harmony and beauty ; but that task is not ours. We must study it as we find it, in a state of moral, intellectual, and physical disorder. We may study man in his original beauty by tracing him back to his primeval state, as the geologist strives to solve the problem of the formation of the earth by studying its various strata, and thus judge of the periods of its existence ; or as, aided by the science of comparative anatomy, restores the imperfect and decayed animal framework, and shows us what it was

when it moved, a "thing of life," in an age of which it presents only a broken relic of the living inhabitants.

But it is doubtful if a study of historic man will do much to solve the problem of health, or of human happiness. To point out the way in which we may rise from our inharmony of mind and body to that divine and celestial order in which the Creator designed that we should live, will require us to look forward and not backward, and to exercise not only the intellectual, but also the moral, mental, and spiritual parts of our natures. Before we, as a race, can be restored to our pristine glory, we must conform to the physical conditions of our being, and bring our souls into sympathy with the moral and spiritual laws of God.

There is abundant evidence that man was created to live at least threescore years and ten; and yet, with all the boasted medical science of our day, the average duration of human life does not exceed half that period. We certainly have doctors enough, and drugs enough, and patent medicines enough; but death goes on, sweeping us away in infancy, in youth, and in middle age; and the problem of health remains unsolved.

The ages seem to have contributed but little towards its solution; and, until recently, human life as a whole has not been lengthened. Talent and learning have been lavished upon the subject, science and art have been brought to bear upon it, but they have never penetrated to the root of our physical maladies and sufferings. The teachings of medical science have tended to sunder the mind from the body, ignoring, to a great extent, the power of mind over matter; study-

ing the phenomena without discerning their combined action, or reciprocal effects, or rising to the primary cause of the difficulty. Medical science has, therefore, failed in its chief object, being superficial and unphilosophical, relating only to visible effects, and removing only temporary symptoms.

True science is a knowledge of things in their causes. An intelligent system of medication aims to remove not only the external symptoms, but also the causes and sources of human suffering. Without regard to this great aim and object, all medical practice is worthy of little respect, as it does nothing towards solving the great problem of health, or enlarging our conceptions of man's life and destiny.

Physicians are inclined to be satisfied with their routine practice, feeling that man's physical, intellectual, and moral disorders are so complicated, and the various causes so diversified and obscure, that they cannot be reached and brought into harmony. But under all these coverings of physical and moral ills, the philosophical and spiritually-developed mind will discern the recuperative powers of Nature; will find the laws of God tempered with mercy; principles, in the exercise of which man may rise from this state of moral degradation, — doubts and fears on the one hand, and physical suffering and premature death on the other, — and be lifted into a clearer light, and a purer atmosphere.

But how to solve this problem is a question fraught with the most momentous interest to all. It certainly can never be solved by stagnant cesspools, neglected drainage, and ill-ventilated apartments; by the squalor and filth of tenement houses, where human beings are herded together as beasts, and forced to breathe air

contaminated by poisonous exhalations which breed disease and death. The problem will not be solved by our present manner of living, — indulgence in rich foods at untimely hours, or the use of articles of consumption which have been injuriously adulterated at the hands of the manufacturers and dealers ; the unhealthy manner of dressing, or the great social evils that war against the best interests of humanity. Its solution will never be rendered less dubious by drunkenness and degradation, brawls and carousals, or the more respectable intemperance of the man of wealth at his home board ; by the use of tobacco or opium in their multitudinous forms, or by other vicious habits and practices which are rapidly increasing, and have become a part of the popular life. We cannot look for its solution in the alarming results attendant upon the laws of hereditary descent, entailing upon children and grandchildren an endless heritage of moral, mental, and physical misery.

All these can never solve the problem of health ; and yet their relation to its solution is intimate and vital. If disease and premature death are dependent upon these many and varied causes, then the problem of health will be solved in so far as these causes and their consequent results are obviated or avoided. The solution lies in a knowledge of, and obedience to, the laws and principles which govern our bodies ; in a knowledge of the deleterious agencies at work around us, their effects upon the human system, and how these effects may be subverted or prevented ; a knowledge of the mind, with its functions and its attributes ; a knowledge of the higher spiritual nature, and the harmony of its reciprocal action upon our physical organization, and upon our daily life, whose burdens we

bear, whose vicissitudes are such a mystery, and whose functions are so little understood.

It has generally been supposed that medical knowledge must be confined to medical men, and that the more ignorant the people were upon medical subjects, the more perfectly could these guardians of public health perform their duty. Whatever of truth there may have been in this supposition, it is certain that little effort has been made by physicians to diffuse information among the people. It is not to be expected that every man can be his own doctor, any more than he can be his own minister, merchant, or mechanic. But before the problem of health can be solved, every person must be so educated and instructed as to have a general knowledge of the laws of trade, that he may be able to transact business correctly ; of the laws of his country, that he may avoid their penalties ; of medicine and his physical constitution, that he may avoid sickness and premature death ; of his spiritual nature, and the principles of Christianity, that his aspirations may reach after God, and influence him to live a consistent Christian life.

The supposition by physicians that a general diffusion of knowledge upon the subject of medicine would work to the disadvantage of the profession, may be true in regard to those who insist upon the use of active poisons, or drugs, the action of which will not bear the scrutiny or investigation of the age. But it is not true of those who use only such medicines as act in harmony with the laws of life, who rather court investigation, believing that a general diffusion of knowledge upon this important subject would promote the interest of every true physician, and afford the strongest possible safeguard for the people against

charlatans and quacks in the medical profession, and against imposition in every business department of life.

The knowledge of medicine is the sister and companion of wisdom ; and just so far as people are instructed in the nature of their formation, the means of preserving health, the character of diseases and their legitimate remedies, will they look with faith and confidence to the true physician.

We would like to see all possessed of sufficient knowledge of the human system, of diseases and their means of cure, of hygiene and all the laws of life, that in an emergency they may be able to do something for the relief of the sick ; or, in case of accident, to perform such duties as may be necessary to preserve life, at least till a physician can be called.

We have known accidents where men have bled to death while surrounded by persons apparently of ordinary intelligence, when the pressure of a finger upon the bleeding arteries would have stopped the blood immediately, and have saved their lives till the arrival of a physician to take up the arteries and properly dress their wounds.

We remember being called to a person bleeding from the nose, after several physicians had exhausted their skill in plugging the nostril with various articles, and had given up in despair. The bleeding in this instance was from the facial artery, and the pressure of the finger upon the blood-vessel where it passes over the lower jaw stopped the bleeding instantly. After continuing the pressure for a few minutes, till the open vessels were closed, there was no danger of further bleeding. We mention these cases here to show how simple and how easy it is to afford relief where a little

intelligence and practical common sense can be brought into use.

For the solution of the problem of health, we must look deeper than the treatment of disease. A physician's duties are not confined to dispensing pills and potions, but should include the education of the people in all that pertains to their welfare. This education is not to be obtained altogether by instruction in medicine and hygiene, but by raising to a higher standard the moral as well as the physical nature; by directing attention to all those points which tend to maintain health, promote human happiness, better the life of the individual, and improve the general well-being of society.

Nations are made up of individuals, each in some degree affecting the whole body. As are the individuals, so will the nation be. The fountain and prime element of all value in this world is human life, healthy human life having the greatest value. In individuals, disease of any limb or organ affects the whole system. In nations, ignorance and vice cannot be confined to individual sufferers. A neglect of sanitary precautions, filthy houses and surroundings, breed squalid people, foster disease, poverty, immorality, and crime. Ignorance makes superstition possible, superstition makes true religion impossible; and where superstition and irreligion prevail, the true interests of community are not regarded, and the problem of health must consequently remain a mystery.

It is apparent that each person, if he would live out his allotted threescore years and ten, must be to some extent his brother's keeper. The old question is still repeated, "Am I my brother's keeper?" It is not necessary that we should rise up and veritably slay

our brother for his blood to cry out against us. I am my brother's keeper that he take not his own life through ignorance, when it is within my power to enlighten him. This is what each man should feel, for it is the true process of reasoning ; and, believing that we are our brother's keeper, we have, to the best of our ability, shown him rather how to prevent than to cure disease. We have endeavored to inculcate into the minds of the people that it is far better, far more meritorious, to keep the enemy out of the field, than to vanquish him in battle ; that it is better to avoid than to heal sickness, and to save to the individual and the community, the time, the money, and the suffering which are the penalties of negligent or ignorant violation of the laws of health ; and, where the sins of the parents are visited upon the children, to enable these innocent sufferers to counteract as far as possible the effects of their hereditary predispositions, and render them better fitted to bear their misfortune.

It is our duty as well as our privilege to exercise all proper care of our health, and to secure our own individual physical and spiritual development. But the good we receive from society is only held in trust, and should be freely acceded to the public good. This selfish feeling of man, this consciousness of his being his own and not another's, seems to have been interwoven in his very nature ; and it is difficult to understand how each man's personality can be his own, and still owe himself, and all he is and all he has, to his fellow-men and to his Creator. And yet nothing can be clearer than the fact. Nature acts by universal, not by partial laws. We appreciate ourselves too much as individuals, and too little as a race. We are

too much addicted to regard ourselves as of more importance than the community to which we belong.

We shall never solve the problem of health by the exercise of this selfish feeling. A man's real possessions are just as large as his own soul. If his title-deeds cover more, the surplus acres own him, and not he the acres. The effects of such possessions tend to belittle the man; and it is often found that the soul decreases in inverse ratio as the possessions increase. There is a law of recompense which men are slow to learn. The man who builds himself into bare walls will be likely to live and die there. The man who builds himself into hearts, who makes himself useful and necessary to the spiritual growth and happiness of others, lives to some purpose, and his name will not be forgotten. It is a glorious thing to build up the temple of a true life; and in this building we should all realize that whatever promotes the public good, promotes the good of each and every individual. When this spirit of fraternity is fully realized, all men will be for each other, and each for all. It cannot be supposed that all men can be equally successful in business, or accumulate an equal amount of wealth. But nothing can be more injudicious or absurd than for the rich to exercise that extreme selfishness which would separate them from their fellow-men by creating classes in society, and thus ignoring their responsibility and duty to those who have less worldly distinction than themselves.

Man's gifts and talents are varied, but there is a law of compensation running through all nature. The capitalist is as dependent upon the laborer to carry out his enterprises as the laborer is upon the capitalist for his daily bread. No individual can stand independent

and alone. But most of our people, with proper instruction and encouragement, might live in a neat, healthy, and respectable manner; and those who are not competent to do this, should most certainly be cared for at the public expense.

The proper authority should always see that our cities and villages, and their surroundings, are kept clean and wholesome. A neglect of this duty may be followed at any time by contagious diseases, which may spread and endanger the lives of those who think themselves most fortunate, and who are not willing to acknowledge the common brotherhood of man, or act upon the higher law that makes us all our brother's keeper.

Until the principle of this higher law of our nature is understood, and universally acted upon, we shall never be free from physical and moral ills, and the problem of health will not be solved.

Health of body is so intimately connected with the aims and objects of life, and with the spiritual nature of man, that the question can never be solved except by embracing in our faith and works the whole nature of man, and his relations to his Maker. When men will recognize the fundamental principle of our being, and universally act upon it, following the precepts of our Saviour, doing to others as we would that others should do unto us, we shall be saved body and soul, and the problem of health will be solved.

We have spoken in the following pages with the utmost freedom upon what we believe to be the great causes of suffering, disease, and death among our people; and if we have been unduly severe in our treatment of the baneful habits and ruinous practices indulged in so widely at the present day, we make no

apology, believing that all who are not for the right are against it, and that he who countenances physical or moral wrong opposes improvement and reform, and by his acts proves recreant to the welfare of his people.

If the medical profession has been severely criticised, it is because its practice deserves it, and not that we have any personal feeling against physicians. If their injurious practices and poisonous drugs are a cause of ill health and premature death, they are entitled to the attention and the censure we have given them.

In the articles comprising this book we have endeavored, to the best of our ability, to set before the people the many and varied causes that conspire to produce so much disease and suffering, and such information upon the subjects of hygiene, the laws of life, and the principles governing the moral and spiritual natures, as shall enable them to maintain sound physical constitutions, mental strength, and moral worth, and thus far enable them to solve the problem of health.

CHAPTER II.

THE SCIENCE OF MEDICINE.

THE science of medicine, both in its past history and its present aspect, presents, even to the casual observer, the marks of its slow progress. Its lack of true scientific principle is demonstrated in the uncertain and often disastrous effects attending its practice. One has only to recur to the past to show the chaotic confusion of ideas which in all ages has characterized this most important of all sciences; and to his own experience, or that of friends, to demonstrate the unreliable and indefinite results which follow its practice.

The question naturally arises, Why is this? Why has the science of medicine failed to keep pace with its fellow-sciences? The answer to this question must be sought for, not in the science itself, but in the errors and false reasonings of its advocates and supporters.

True, medicine has, perhaps, less positive and palpable foundation to rest upon than the other sciences; but still physicians are responsible, to a great extent, for all there is lacking, both in the theory and practice of medicine at the present day. Medical men appear to look, not to see how they may improve science and better their fellow-men, but to their own personal aggrandizement. Ever ready to wrangle

and dispute, their controversies partake more of the nature of personal quarrels than of efforts to acquire knowledge and perfect science. Party prejudices and jealousies have been, and still are, a great incubus upon advancement. The secrecy and mystery also with which physicians chose to invest medicine, supposing that a general diffusion of knowledge upon this important subject would work to the disadvantage of the profession, had no small weight in hindering reformation. All history shows that there can be no real progress in any department of science from which the masses of the people are debarred. During the dark ages, while only the clergy were supposed to be learned, knowledge came to a stand-still, art died, and trade stagnated in the marts. It was only when the whole people received the light of knowledge that the arts and sciences could be advanced.

The great cause of all these evils in the practice of medicine is traceable to the want of adaptation of physicians to the profession, and to errors in the fundamental principles of reasoning. It has usually been sufficient recommendation for a physician that he has a diploma from a medical college, and belongs to a medical society, without a question as to whether he has common sense, or whether nature has fitted him for such a position. The society's diploma has been sufficient to cover all mental, moral, and physical deficiencies. But a sifting period must come, and physicians, as well as men of other professions, must rest upon their own merit. Students of medicine should weigh well these facts, and reflect upon what they must develop, for they can but see that men are to be estimated for what they *are*, and not what parchment may represent them to be. Great ideas are to

take the place of great doses of medicine, and a different standard of heroism must arise—a standard more in accordance with common sense and real worth; and physicians whose practice will not stand the test will find their occupation gone, while those who practise in harmony with nature's laws will be esteemed for the real benefit they will be to the suffering portions of the human race.

In this era of investigation we are advancing with rapid strides into an age which disinters everything; which handles carefully guarded old theories without mercy, and which we hope will soon rid the community of many of the errors of the past, and aid in solving the problem of health.

We can but regret that the noble profession of medicine has been made the theme of so much speculation, and has made so little progress in the march of advancing science.

Anatomy, physiology, and, to a certain extent, pathology, may be considered as entitled to rank with the exact sciences, while therapeutics, or the art of treating disease, is still conjectural, and subject to various, and we may say, opposite opinions, in regard to the laws and means which govern its results. With this diversity of opinion among medical men, and its effects upon the public mind, it may be difficult to designate any general course of treatment that will satisfy the minds of all. The subject has been supposed to be too complicated to obtain from inquirers outside of the profession that amount of attention necessary for understanding its real merit, while among medical men, consistency to pledged opinions, considerations of interest, or obedience to arbitrary rules of medical societies, may warp the judgment of other-

wise honest and deserving persons. Notwithstanding all this, it must be said that physicians are active theorists and experimenters, and discuss the merits of poisonous drugs with great zeal, but do not take pains to ascertain whether the ideas which they put at the foundation of their reasoning and practice are really founded in nature, or can be made to harmonize with her laws. They seem to lack a well-grounded basis or fixed principle for their practice. As a sailor would express it, their intellectual canvas is too large for their depth of keel, and as a result they are blown about by every wind of doctrine, varying their practice to suit the fashion of the times, and changing their experiments from the use of one poisonous drug to that of another equally poisonous. Any person who will take the trouble to inspect the medical journals published a few years ago, will find many things there laid down as medical truths which are now generally admitted to be erroneous. The length of a common professional life is sufficient to disabuse most physicians of many convictions which they had received on trust, and once considered unchangeable. People must have noticed these changes in treatment by their physicians, and have often been made to realize the fact that such changes were not always for the better, but more frequently only a change from the use of one poisonous drug to that of another no less pernicious in its effects.

Under such delusive treatment people have come to regard the medical profession with more or less distrust. And not without reason; for, however humiliating it may be to professional snobs, it is nevertheless true that the public mind is the tribunal by which all professional action must be judged. But as

medicine is, or ought to be, the art of curing disease, it is right that intelligent and reasonable physicians should receive the confidence and respect of the public, and the people have in turn a right to expect at the hands of the physician relief from their sufferings, and the cure or removal of their complaints. And yet, a person being sick, with such conflicting theories and tendency to experiment as exist among medical men, can hardly be aware of what kind of treatment he is likely to receive; and we believe many cases which might have terminated favorably in a few days by the use of simple remedies, have, by "heroic treatment," been protracted to weeks and months, because the importance of the case, as the physician thought, required that Nature should be ignored, and the patient be artificially "taken down," and after a time artificially "built up." If the disease or the "heroic treatment" adopted did not prove too much for human endurance, such patients, after a time, became gradually convalescent, and finally recovered, as they supposed, only to find their constitutions undermined, and their power of endurance greatly lessened. One of the most renowned allopathic physicians of this country, in looking back upon the conflicting theories and wrong practices, said, "I sincerely believe that the unbiassed opinion of most medical men of sound judgment and long experience, is made up, that the amount of death and disaster in the world would be less if all disease were left to itself, than it now is under the multiform, reckless, and contradictory modes of practice, good and bad, with which practitioners of adverse denominations carry on their differences at the expense of their patients."

The conflicting theories among physicians, it must be remembered, are all upon the subject of treatment, and most of them upon the use of *poisonous drugs*, and do not embrace anatomy, physiology, or any of the fixed sciences. How humiliating to reflect that so many thousands of our best men have for so many ages spent their time and their talents in discussing and experimenting upon the use of poisonous drugs as medicines, which it would seem that common interest and the common sense of mankind should have excluded from the attention as unworthy of notice as curative agents! Especially would this seem true when we reflect upon the rich provision Nature has bestowed upon us, and so bountifully distributed through the land. Nature is ever kind, and the recuperative powers of the human system are wonderful when the indications of cure are followed and assisted by the harmonious action of the innocent remedies so liberally provided. We believe that if poisons had been ignored, and one tenth of the talent and study spent on them had been bestowed by physicians upon these natural remedies, the world would have long since been freed from the larger portion of the sickness, sorrow, and premature death which have marked the past ages, and which weigh so heavily upon the present.

We look forward with confidence to the time when these erroneous theories shall be swept away, and the true science of medicine adopted; when physicians will all recognize the great fact that *science* is *harmony*, and anything that opposes or breaks this harmony will be acknowledged to be wrong, and immediately abandoned; that when physicians arrive at the *true* science of medicine, we shall all agree upon

the proper modes of treating disease, as we now agree upon the subjects of anatomy, physiology, and the fixed sciences, It is a universal fact that, as far as our actual knowledge extends upon any subject, so far we must necessarily all agree, for *truth is always consistent with itself*. So far, then, as physicians actually know and understand the laws of Nature and her means of cure, there can be no disagreement. It is only upon subjects that are not understood, upon subjects of human speculation, that men differ so widely. We believe in the harmony of Nature, and we feel quite sure that if physicians would give up the use of noxious drugs, and, turning their attention to Nature, study and comprehend her resources, they would adopt her means of cure. Then medicine would soon become a fixed science, upon which we should all agree; for upon this principle there can be no material disagreement.

About fifty years ago, while the system of using poisonous drugs was terribly prevalent, the people became alarmed, and a great reform was inaugurated, in which poisons were discarded, and disease treated with remedies harmless in their nature and action. Tired of being dosed with mercury and antimony, with the disastrous and terrible effects of the use of these poisons before their eyes, the people were eager for a change, and accepted with avidity the light of truth and reform thus held out to them, however crude might have been the practice. For a time the excitement was intense. The new method of practice met with the bitterest opposition from the allopathic fraternity; but because of its true foundation in nature, its demonstrated superiority over the old system of practice, the rapidity with which disease was dispelled

and cures effected, and the evident fact that some reformation was absolutely and imperatively necessary, instead of being crushed out of existence by the flood of invectives, ridicule, and condemnation hurled against it by the members of the old school, it lived, grew in public favor, and bade fair to eventually supersede the old routine practice.

But science is progressive. The labor attending this practice was arduous, and the remedial agents crude; but their success in the cure of disease was unparalleled in the history of the world. Within the past few years this school, instead of basing its researches upon and perfecting the practice, concentrating and making palatable the medicines used, launched out into a new sphere of experiment.

Disregarding the fundamental principle of nature,—innocent medication,—they began to test the properties of drugs far more poisonous in their nature and injurious in their effects than those the great reformers sought to abolish from the *materia medica*. Gradually the principles and practices of the new school of medicine became changed, until scarcely a vestige of the precepts and doctrines of the true reformers remained. The society, after appearing under various titles, at last became known as eclectic,—a term used to designate its non-exclusiveness and liberality of view. Commencing with well-grounded principles, most of them have departed from the fundamental truth and plain dictates of nature, condemned what they consider the “crude reasoning” of their forefathers in holding true that what was poison was foreign to the body, and consequently injurious, and established a practice similar to the one their forefathers sought to remedy and reform, except that they differ in regard to some

of the poisons used. This departure from the principles of nature has been going on until the use of virulent poisons has become prevalent among eclectic physicians to an extent but little known and little realized by people generally. In examining the medicine case of the modern eclectic, one would be amazed at the vials of deadly poisons there set forth. Strychnia, phosphorus, prussic acid, arsenic, aconite, veratrum, belladonna, digitalis, and a host of others, appall him with their deadly array. We are informed by a wholesale druggist of this city, that he manufactures for the eclectic medical profession of Boston and vicinity many barrels annually of the above-mentioned poisonous drugs. During the last year there were imported to this country and consumed 1,636,335 pounds of arsenic and 597,213 pounds of nux vomica (strychnia). These are but two of the agents by which physicians "restore health;" and if the detailed statistics of all the poisons used for medical purposes could be obtained, it would appear almost incredible.

The eclectics did a wonderful good when they abolished the use of mercury; but the good was far more than counterbalanced when they resorted to more violent and more deadly poisons. Mercury and antimony did great harm, and produced terrible suffering; but we have no hesitation in saying that, in proportion to their use, the vegetable poisons in the hands of the reformers are more deleterious in their effects, and result in more deplorable and terrible injury, than the mineral poisons dispensed by allopathic physicians.

The mistake of the eclectics arises in supposing that the poisons they use, being vegetable, are merely temporary in their effects, and are readily thrown off from the system. But this is not the fact. The vegetable

poisons are more potent, being more readily absorbed ; and being more perfectly assimilated, are therefore more difficult to eliminate. Mercury and antimony produce terrible and lasting effects upon the system, but strychnia, prussic acid, aconite, &c., because more powerful, and because they strike more directly at the citadel of life, are far more dangerous and deadly ; their effects are sudden and fatal, and they leave little trace whereby to follow their terrible course. Their deleterious effects are made apparent every day in the weak and debilitated condition of mind and body ; the shattered nervous systems with which persons rise from fevers and other acute diseases ; in the functional and structural diseases of internal organs, whose delicate and intricate texture has been poisoned by the action of these drugs ; in the alarming and rapid increase of sudden and inexplicable deaths.



SUDDEN DEATHS.

That the rate of mortality from sudden deaths has greatly increased during the past few years is a fact patent to all. Yet the cause of this increase has been wrapped in mystery. If a person dies suddenly, the doctor looks wise, and says, "Heart disease;" and the people accept the decision. Structural lesion — that in which the heart's structure is affected — is a disease rarely met with, even at the present day. In most persons who are supposed to have died from heart disease, post mortem examinations reveal no such cause of death. Where, then, are we to look for the cause of so many deaths from heart disease? As a

result of thirty years of professional life and practical observation, we feel quite sure that the true cause will be found in the habitual use of poisonous drugs, and that persons so stricken have frequently been under the care of physicians, or been in the habit of taking medicine upon their own responsibility. What but sudden death could be expected when we consider the fact that many of the so-called remedial agents in general use are among the deadliest poisons that the earth furnishes. It is supposed by many that these active poisons are harmless in small doses, and they are given to allay fever by slowing the heart's action. Eminent physiologists have demonstrated beyond a doubt that these poisons lessen the frequency of the pulse only by partially paralyzing the nerves of the heart, slowing its motor force. Moreover, the same physiologists have proved that these poisons accumulate in the system, and may at any moment manifest their destructive nature. The effect of the first dose is to paralyze the heart only to a slight extent, and may be comparatively harmless. But little by little, as the drug is taken, the accumulation goes on, until at last a sufficient amount is accumulated in the system to at any moment prove fatal when its effects are concentrated upon the heart, and the victim falls suddenly dead of heart disease. Yes, paralysis of the heart caused by the action of a poisonous drug. This is not mere theory; the facts have been proven, not only by direct experiment, but from autopsies upon the bodies of persons who have died suddenly, revealing absolutely no lesion, thus forcing physicians to the conclusion that death resulted from the accumulated effect of some poison,—a drug so subtle in its action as to leave no trace except the one

terrible consequence,—death. We appeal to our readers if within their experience there have not occurred cases of sudden death when there seemed little apparent cause, and when, upon reflection, it would seem that the drugs prescribed by the physician did more injury to the patient than the disease itself.

Physicians pretend that some of these poisonous drugs are thrown off from the system, as evinced by their presence in the excretions. Nature does eliminate many to some extent, especially by way of the kidneys; and many of the medicines given for various purposes are liable to concentrate their action upon the kidneys, and by their accumulated effect poison the delicate tissues of these organs, thereby doing an irremediable injury. And to this fact we may attribute many of the cases of diabetes, Bright's disease, &c., which used to be so rare, and which are now so common and so fatal.

We believe that these poisonous drugs are among the most potent agents in filling our land with unyielding cases of chronic disease; that men rise from fevers and other acute diseases with impaired constitutions, shattered nervous systems, and inability ever to regain their former health, solely on account of being dosed with drugs for which their systems had no affinity, and whose effects, instead of being curative, were only deleterious.

Another source of sudden death, arising from the use of poisons as medicines, is in the mistakes which are constantly liable to occur in their administration. We often hear of cases of accidental poisoning, not only through mistakes of apothecary clerks in not rightly interpreting a physician's prescription, but in households, where such drugs are used and kept constantly on hand.

To prevent the occurrence of such mistakes, the project has been advanced many times of putting up dangerous medicines in peculiar shaped jars or bottles. But this will evidently not arrest the evil. The carelessness which would omit to place a caution against poison, might likewise place the poison in the shaped bottles which should be the mark of harmlessness; and it is not difficult to perceive that the present danger, instead of being removed, might be even aggravated by such a course. No arrangement of this kind can make poisonous medicines safe to have about in frequent use.

There is one simple course, and one only, by which we can free ourselves from the danger of swallowing death instead of the health-giving draught. And that course is to do away with the poisons and the danger at one and the same blow. There are remedies enough that are not poisons. NATURE furnishes them in abundance, and it needs only care and research to find them and apply them without danger, and with better result than can possibly be obtained by the use of poisons. Why, then, should poisons be continued in use? Is it the result of prejudice, or is it because physicians are unwilling to investigate and learn "the more excellent way"?



POISONS AS MEDICINES.

The practice of introducing the most deadly poisons into the human system, when delicate and weakened by disease, is abhorrent to plain practical common sense, and repulsive to the minds of those who have

learned the powers of nature to restore health by harmless and inoffensive means.

All nature moves in harmony ; man alone seems to have marred its beauty. The beasts of the fields, with their unerring instincts, avoid the poisonous plants that may chance to grow with their food, while the misguided reason of man so far departs from this harmony as to destroy his own system by the use of poisons which the lower animals refuse.

Not only is this practice contrary to nature and the better feelings of every human soul, but our very instincts cry out against it. We remember an instance of a little girl who came home from the druggist's, whither she had been sent with a doctor's prescription, and sobbed out, as she gave the package to her mother, "I hope you are not going to give this stuff to father ; the man took it out of the same bottle that he did the poison the other day for you to kill rats with." The mother replied, soothingly, "Don't cry, dear, you don't understand science." No, she could not understand a science so opposed to nature and abhorrent to her feelings. Yet it is a fact that the physician of to-day "*cures*" his patient with a little smaller dose of the same article with which he *kills* his neighbor's dog. True science consists in the harmony of Nature's laws. A poison is, scientifically, made to kill ; is it science, then, to give it to cure ? It seems to us of that kind which St. Paul designates "science falsely so called." The true science of medicine embraces those remedies, and those only, which act in harmony with the laws of the animal economy ; that course of treatment which maintains the integrity of the constitution unimpaired by the remedies employed ; that course which is restorative and

not debilitating; that course which assists Nature to throw off disease.

Physicians have experimented with almost everything but simple remedies, the curative properties of which they seem to have overlooked; as people often wander many miles out of their way in pursuit of happiness, when all the while the object of their search has been lying directly in their pathway.

We contend that poisons should never be used as remedial agents; that Heaven has given innocent remedies for every phase of disease which flesh is heir to; and it only requires persevering study, and a correct knowledge of their action upon the human system, to teach men that to obtain good ends we must make use of good means.

Mankind are beginning to learn that the more closely they live up to the plain dictates of nature, the more deeply science is scrutinized in all her departments, the more positive she will become in her testimony in favor of a rational and innocent practice. Let medical men of every description throw off their false garb, open their minds and investigate Science without fear, invoke her aid in their endeavors to relieve human suffering, and we may hope that by her efficient aid in developing the true principles of medicine the present unhappy differences between sects and parties may be removed, and all unite upon the broad principles of nature.

Thirty years of professional experience and practical observation have convinced us that all disease that is amenable to treatment may be cured by the use of innocent remedies, and in no instance have we seen a case when we considered it necessary or judicious to use poisonous agents. We believe that by uniting

science and nature we have done much towards perfecting a rational and innocent system of medicine, which will eventually be adopted by all physicians.

We believe the time has arrived when every error and false system of practice should be exposed to the public eye, that they may receive the condemnation which they merit; that the public may be made aware of the danger in using these poisonous drugs, and that all who are sick and suffering may be relieved from their ills by the use of innocent remedies.

CHAPTER III.

SANITARY SCIENCE.

DRAINAGE.

DRAINAGE has occupied the attention of most civilized nations. The records of ancient history prove that as the sanitary condition of the people was regarded, its importance became recognized. Previously to the introduction of drains and sewers in cities, it was customary to remove, by means of carts and hand conveyances, all kinds of offal and filth to the country, some water-course, or other general depository. This was sometimes done by the occupants of houses, who took it directly from their premises, or threw it into the streets, whence it was removed by the public authorities, sometimes not for days or weeks. This filthy condition of the cities may be considered one of the principal causes of the dreadful ravages of disease during the middle ages, and during the last century.

It can hardly be asserted that in regard to the sewerage of cities and large towns modern civilization has made much progress. Rome, six centuries before the Christian era, with less than two millions of inhabitants, had a system of sewerage that would compare favorably with that of Boston or New York. Tarquinius Priscus (B. C. 635) built the cloaca maxima.

Its foundations were laid forty feet under ground, and its branches were carried under a great part of the city, and concentrated in one grand trunk, which discharged itself into the Tiber, west of the Capitoline Hill. It was formed by three arches, one within the other, the innermost of which was a semicircular vault, fourteen feet in diameter. Its mouth, where it enters the Tiber, still exists. A cart loaded with hay could pass through it. Agrippa, when he cleansed the sewers, passed through them in a boat. Nero threw into them the victims of his midnight orgies.

Agrigentum (B. C. 480) was also celebrated for the extent of its sewers. Jerusalem, the City of the Great King, had an admirable system of sewerage; and its water-works are scarcely surpassed by those of the Schuylkill, Croton, or Cochituate of our time.

With all our boasted advancement in literature, art, and science, it is humiliating that the important consideration of drainage has received so little attention, and the facilities for draining have been so little improved.

We believe that much sickness, suffering, and death might be prevented by a thorough examination into their causes, and by an intelligent understanding and enforcement of the conditions and the laws of sanitary science. These subjects have not secured that attention from the authorities, from physicians, or from the people generally, that their importance demands. It is true that frequent warnings have been given by physicians and through the press regarding the danger of defective drainage, or of not properly disposing of house waste; and yet many housekeepers live in utter neglect of all precautions, and kitchen drains and cess-

pools send forth their poisonous emanations, and general ill health and frequent fevers and death are the result.

The immediate and fatal effects of such neglect are perhaps more apparent during the hot season; but they are always disastrous to health. Scarlatina, diphtheria, typhoid fever, and other manifestations of disease, often prevail to such an extent as to spread consternation, terror, and death through neighborhoods, villages, and cities; and, notwithstanding the apparently mysterious character of some of these maladies, there seems to be no doubt that their prevalence is largely owing to causes which are within the control of the sanitary agencies which should be possessed and enforced in every community. Defective and deficient sewerage and ventilation are the evils that produce that subtle poison which generates in the air, and which is so fatal because it is breathed directly into the system, and attacks the very citadel of life. We shall therefore find no antidote so effective as attention to the ordinary hygienic conditions with which we should all be familiar. True science will demonstrate the circumstances under which this class of diseases is produced, and medicine, in harmony with Nature's laws, may reveal the true mode of treatment. But observation of proper sanitary laws is the best prevention of disease, and the only efficient protection for any community.

In large cities, the perfection of the system of sewerage is of the utmost importance. As these sewers extend through the whole city, the consequences of a defect in them are wide and lasting. The gases from them are of the most noxious kind, their poisons are most detrimental to persons who are obliged to inhale

them, and without the utmost care they will work their way into dwellings.

The action of wind and tide upon the outlets of sewers often creates a pressure which forces these gases through cesspools into many of our houses, necessitating the provision of some ventilation or outlet to relieve this pressure. In Boston this has been partially accomplished by omitting the usual cesspool, and opening the water-conductors directly into the common sewer; and there are now twenty thousand of these opening in this manner, the upper ends of which are so situated as to discharge these foul odors near the windows of sleeping apartments. The vitiated material contained in these gases, mixing with the atmospheric air, gradually descends towards the earth, to exert its baleful influence upon pedestrians, as well as the inmates of houses.

The bad air from sewers is, however, not simply injurious when it escapes directly into houses; it is hardly less so in going out through its natural outlets on the skirts of the city, where it poisons the atmosphere, and being blown about, becomes a fruitful source of general ill health to the people. Instead of sewerage being discharged on river flats or about wharves, it should be carried down to deep water. Instead of ventilation through water conductors, sewers should be extended to some convenient locality out of the thickly-settled portion of the city, where ample means should be provided for their ventilation through disinfectants or filters, which would neutralize the noxious gases, and allow only pure air to pass.

The necessity of drainage is by no means confined to cities and dwellings. The importance of the system renders it necessary to extend our investigations, and

include all localities where it is necessary to prevent the stagnation of water, or the premature decay of vegetable matter. The necessity of this view of the subject is proved by the fact that in the low, swampy parts of our western states fever and ague prevail to such an extent as to become a fearful calamity. But when the land is drained and cleared, and the sunlight, with its vivifying influence, allowed to penetrate, the same districts become healthy, and such diseases almost entirely disappear. It is safe to assert that most of the low, putrid forms of disease, which have prevailed to such an alarming extent, and which have been supposed to be contagious, are only epidemic, manifesting themselves in such localities, and attacking such individuals, as are found most susceptible to their influence, the disease, in each individual case, being produced by the same general cause, and not transmitted from one person to another, as is the case with contagious diseases. The fact that many persons in the same neighborhood have been attacked simultaneously, and that several persons in the same family have taken the disease, one after another, does not disprove this assertion. Such diseases are epidemic, and the result of the same general cause, manifestly, to a great extent, under the control of man, and which might have been removed, and such fearful consequences avoided.

If such diseases are not wholly produced by causes within our reach, they are certainly aggravated and rendered more fatal by the foul emanations which are the result of neglect of sanitary laws.

Whatever may be the primary cause of this class of diseases, it is certain that there are various exciting causes acting upon the system in certain localities, and

at particular times, which make them more putrid and fatal, and which cause them to spread through families or neighborhoods. From this fact many have been led to suppose them contagious; but careful observation has discovered that there is no manifestation of contagion in their operation. Pure air is necessary to health; and we cannot breathe vitiated air without contaminating the blood, and filling the system with accumulations of morbid material, which tend to produce ill health and shorten human life.

Buildings erected upon land artificially made by filling up low, wet places with a mixture of filth and soil, are exceedingly unhealthy. The same is true in cities where the filth of the bays and inlets has been filled in for building purposes. Boston has been remarkable for its progress in this direction. Mountains have been "removed and cast into the sea, and the sea made dry land." In this way thousands of acres have been reclaimed from the sea, and thousands of dwellings have been built thereon; but we fear that where there has been a large quantity of filth at the bottom it will prove injurious to the health of the citizens, and react upon the prosperity of the city.

The saying "there is nothing hidden that shall not be revealed," is nowhere more perfectly demonstrated than in this instance. There is a continual foul odor emanating from land thus made; and not only the odor, but the filth and corruption, must inevitably come to the surface. The effects of such emanations may often be seen in the stained and discolored walls of the basement rooms. Persons dwelling in such unwholesome houses lose their appetite, become listless and enfeebled, the health gradually fails, and they either die prematurely, or become confirmed invalids.

In our large cities it is a common practice to bestow great care upon the sanitary condition of streets and sewers in portions of the city occupied by the more fortunate class of citizens, and to allow portions occupied by the poor and unfortunate to become filthy and unwholesome. But this is a great mistake. The squalid regions should receive by far the larger share of public attention, not only because they are occupied by a far larger number of people on an equal space, but by people who, on account of their ignorance and poverty, are much less cleanly in their habits and in the care of their dwellings. These portions of the city should be often inspected by the authorities. The drainage should be kept in perfect order, and no accumulation of filth should be allowed in the streets and alleys. And our care should not stop outside these dwellings of poverty. People who do not exercise the least care in regard to the sanitary condition of their dwellings, should be cared for by the city fathers; and every dwelling that is unfit for habitation should be immediately put in proper sanitary condition or removed. This care is not alone a matter of charity towards the poor, but of self-protection to the community. The foul, fetid gases which arise in the overcrowded and neglected districts bear the seeds of disease and death, not only to the starved denizens of these wretched dwellings, but are carried on the wings of the wind to every street and avenue, invading the mansions of the rich as well as the dwellings of the poor. We should not be slow to learn and to realize the fact that the law of common humanity is also a law of compensation, and will distribute its revenge as well as its reward, and that neglect of duty towards the poor and destitute will surely revenge

itself upon every community which does not insist upon the enforcement of proper sanitary laws. We must make all parts of the city clean and wholesome, and permit no hot-beds of disease to reek and fester in our streets or in our borders. When we as a people fully learn this great lesson of humanity and of common prudence, we shall have reached one of the most important points of all past investigation upon the subject of sanitary science.

THE COUNTRY. — The same causes which increase the rates of mortality in our large cities, act to a certain extent in every village and every farm-house. The air is more or less poisoned by filth wherever drains are neglected, and the waste matter of houses and yards is allowed to emit its baleful emanations. From a neglect of proper sanitary regulations, many comparatively small villages are rendered more unhealthy than large cities. Hotels and boarding-houses at the sea-side, and other places of public resort, where people have gone for rest and recreation, have been converted into hospitals for the sick by defective drainage and the accumulation of filth about the buildings. Let hotel and boarding-house keepers, as well as private families, give special attention to the matter of cleanliness, outside as well as inside their dwellings.

CELLARS. — Fever and other fatal diseases are often caused by foul air from dark, damp, and unventilated cellars. Confined air, without the purifying influence of sunlight, soon becomes impure and unwholesome. Cellars often serve as reservoirs for impure air, which, in addition, is often loaded with decomposed organic

matter and foul gases, given off from the masses of decaying vegetables with which they are stored. Cellars should be kept as clean, pure, and well-ventilated as any portion of the house.

We must recognize the fact that every house, village, and neighborhood breeds its own epidemic, and needs its sanitary protection. It is not enough to have doctors and apothecaries; they are called on after the mischief is done. A little wisdom, a little forethought, a little care, and a trifling expense, might have rendered their services unnecessary. Where we find disease or general ill health prevailing in any household or neighborhood, we may well suspect that it is dependent upon some local cause, for which somebody ought to be responsible. It may seem improper to interfere with a neighbor's yard, or sink-drain, or cesspool, and especially with his in-door arrangements; but if it be the means of saving the lives of your children and those of your neighbors, it is certainly somebody's business to interfere, and abate such nuisances. If epidemic diseases are not produced by such influences directly, they certainly are rendered more malignant and fatal. The true course, then, is to appoint an efficient sanitary committee, have an examination, make a report, and then go to work in earnest to make such reforms as may be needed. A few days' labor, and a few dollars expended, may save lives that we would not have lost for millions.

VENTILATION.

The subject of ventilation is not properly understood, or, if comprehended, its laws are not regarded. Our houses, halls, and churches are constructed without much regard to the fact that fresh air is necessary for the preservation of life and health. The arterialization of the blood in the lungs is essentially dependent on the supply of oxygen contained in the air which we breathe; and that air is fit or unfit for respiration in exact proportion as its quantity of oxygen approaches to, or differs from, that contained in pure atmospheric air.

The report of our board of health has few more interesting revelations than those which relate to the evil effects of bad air. In fact, there are few of the evils alluded to in this view of the sanitary condition of our city that are not in some way connected with an impure condition of the air. All decomposition and decay necessarily affect the purity of the atmosphere, and the very act of breathing in a confined space vitiates the air, and makes it unfit for the purposes of our animal economy. The ventilation of our schoolhouses is therefore of primary importance. It appears that the proportion of carbonic acid in the atmosphere of our school-rooms averages 1.18, while it has been shown by eminent English and German sanitarians that the amount becomes injurious when it reaches 0.6 or 0.7 per 1000, the proportion in pure air being 0.4 per 1000. An analysis of the particles of dust that float in the air of our school-rooms shows them to be the result of the changes which are constantly going on in our social economy, and which

require to be neutralized by an abundant supply of fresh air. Some of these minute substances are not easily seen, although they may be smelt; and it is these organic elements, exuding from the lungs and the skin, which are even more injurious than the effluvia which comes from the clothing of the scholars. It was noticeable that in those school-rooms where carbonic acid impurity was most marked, there was also the most offensive odor, showing that the pollution of the air is greatest among those classes who are least attentive to the laws of cleanliness.

Our sleeping apartments, where we all spend about one third part of our lives, should be large and well ventilated, and should be constantly supplied with pure air. It may not be well to allow it to blow directly upon us; it may be admitted from a window behind a screen, or into an adjoining apartment, and thence through an open door into the room. The importance of securing free ventilation will be seen when we reflect that the demand for air for a single person is, upon an average, about seven cubic feet a minute. Suppose, now, that a sleeping-room contains two thousand cubic feet. A person goes into such a room, and closes the door, and the supply lasts the occupant about five hours, and for the remainder of the night he must continue to breathe over and over again the same air, which could not sustain life were the room perfectly tight. He is kept alive by being partially supplied with air through the crevices in the walls and about the door and window. But a person spending the night in this manner is not refreshed; and a continued habit of sleeping in a contracted and ill-ventilated room, will in time induce headache, dizziness, dyspepsia, and a host of kindred diseases.

Now, let us keep these facts in view in an examination of our modes of ventilation. We inhale oxygen, or *vital* air, and throw off carbonic acid gas, — a gas which, being specifically heavier than pure air, when left undisturbed will settle to the bottom of the room, as it does in deep cellars, wells, and mines, where, if inhaled, it proves instantly destructive to life. Sudden deaths may not often occur in our living or sleeping-rooms from inhalation of vitiated air. The evil, however, is none the less fatal; it does its work slowly, it may be, but surely. The system of ventilation adopted in our private and public buildings is radically defective. The old-fashioned fireplace was a good ventilator, and to it may in a great measure be attributed the fact that the mothers and daughters of the past generation were healthier and ruddier than the enfeebled matrons and sallow-complexioned daughters of the present day.

When we closed up the old-fashioned fireplace we neglected to provide a substitute, and much sickness, suffering, and ill health have been the result. What is really needed in every building, public or private, are two compartments, built in connection with the chimney, for ventilation, one of them being near the flue, so as to be continually kept warm, the other away from it, where the air in it will be kept cool. Every room should ventilate at the bottom into the cold-air flue, so as to let the carbonic acid gas, which is heavier than the atmospheric air, and settles to the bottom of the room, pass down to the earth; and from near the top of each room into the warm-air flue, to allow the impurities and gases which are lighter than the air, and which always rise to the top, to pass off into upper space.

On winter evenings, when gas-light is used—the gas being also a rapid consumer of oxygen—in the ball-room, public assembly, church, or lecture-room, we suffer seriously from the impurity of the atmosphere in consequence of imperfect ventilation; and instead of emerging from the winter season with invigorated health, spring generally finds us weakened and debilitated. By the exercise of a little intelligence and common sense we may so regulate our habits and conduct as to avoid much of the physical and moral evils under which we are now suffering. We commend this subject to the earnest attention of our school committee, to parents, guardians, and teachers everywhere, and we hope it will receive something more than a passing notice.

DISINFECTANTS AND DEODORIZERS.

Infection and foul odors cause a great variety of diseases. They both arise from decomposition and decay of vegetable or animal matter, or both. To deodorize is to take away the bad smell. To disinfect is not only to do this, but to arrest the progress of decay, and thus cut off the supply of a bad odor. Our grandmothers thought they got rid of the ill odor of a sick-room by burning brown sugar or tar. This gave a strong and more agreeable odor; it overpowered the other, so that it was not perceived, but did not destroy it. Both odors were really present, and the air was equally impure, only more agreeable to the senses. Hence, to deodorize foul air in a room or locality intelligently, substances must be used which,

by causing a new chemical combination, destroy the odor altogether; but if the decomposition continues to go on, other odoriferous particles begin to arise, requiring a new application of the deodorizer. On this account all deodorizers are efficient only temporarily; hence the only rational method is either to remove the offending material, or employ disinfectants which arrest further decay. If the material both arrests the decay and destroys or absorbs the offensive odor, it is doubly valuable. Two hundred grains of chloride of zinc in an ounce of water is a powerful agent in neutralizing bad smells, and in arresting both animal and vegetable decomposition in ships, hospitals, dissecting-rooms, cellars, privies, and water-closets, without having any bad odor of its own. For disinfecting purposes, mix one pint of the above fluid with four gallons of water.

There are three powerful disinfectants — carbolic acid (with an objectionable smell), chlorine, and permanganate of potash. These last two are quite expensive. These disinfectants act by combining with deleterious substances and rendering them harmless, while antiseptics prevent and arrest the decomposition of animal substances.

The only effectual way of disinfecting an unhealthy locality is to remove the cause of the trouble, and prevent its recurrence by thorough ventilation and habitual cleanliness.

The most common and available disinfectant and deodorizer is copperas, — crude copperas, — sold by druggists at a few cents a pound, under the name of sulphate of iron; one pound in two gallons of water, used as often as necessary, will render all odors imperceptible, acting at the same time as an antiseptic,

deodorizer, and disinfectant. For disinfecting cess-pools and water-closets nothing can be better. By this means the most filthy water-closet may in a few moments be rendered as sweet as any part of the house.

On board ships and steamboats, about hotels and other public places, there is nothing better to purify the air. Simple copperas, in a vessel with sufficient water to dissolve it, and placed in the room, will render a hospital, or other place for the sick, free from unpleasant smells. In butchers' stalls, fish-markets, slaughter-houses, sinks, and wherever there are offensive putrid gases, dissolve copperas, and sprinkle it about, and the smell will soon pass away.

CHAPTER IV.

STIMULANTS.

STIMULANTS of some kind have been used from time immemorial by the great majority of people in all parts of the world. Barbarous and half-civilized nations have all been able to find in their own countries plants from which they can manufacture drinks that stimulate and intoxicate. Among the more civilized nations we have stimulants prepared in greater variety and in a more scientific manner, the principal of which are tobacco, opium, and the various preparations of alcohol. All intoxicating stimulants, of whatever nature, are more or less injurious to the human system, and when taken into the economy, seem to have the power, not only to lessen the desire for food, but prevent its proper assimilation into nutrition. They enable persons using them to do with a less amount of food for a time, as shown by the fact that smokers and drinkers are almost always moderate eaters; yet the nutrition of their systems is always defective. All persons in the habitual use of such unnatural stimulants are incapable of properly digesting and assimilating that amount of food required to keep up the health and strength of the system to the old age to which they might have attained without its use. They may, by means of a good constitution, maintain the integrity of the system for a time, but

they will find themselves breaking down ere they have reached the zenith of manhood. Enfeebled constitutions and premature death are almost invariably the result of the habitual use of stimulants, and those who live temperate lives have a greater chance for attaining a good old age.

The desire in any person for a stimulant is always morbid. The healthy system needs no stimulation; it is only when an unhealthy appetite has been created from habitual use of some stimulant, that the craving of the system for its accustomed good is experienced. This morbid appetite may not always have been created by the person himself, but may have been bequeathed him by the laws of hereditary descent. Such idiosyncrasies are not infrequent.

There may be persons constitutionally adapted to intellectual labor who, from the exhaustion of the vitality of the system consequent upon excessive mental work *feel* the need of stimulation. But it is not stimulus that is required; it is rest. And if such a person uses stimulants and continues his labor, he does it at the risk of a broken constitution, and will be likely to fill a premature grave. Many a great writer and speaker has ruined his constitution, shattered his nervous system, and rendered himself incapable of mental exertion in after years, by unduly stimulating his brain, that he might accomplish some brilliant result, without a thought as to the misery the practice must inevitably entail.

But if stimulation incites the brain to greater activity, it is only temporarily. There can be no excess in the animal economy without a corresponding loss; and the momentary exaltation of the functions of the mind is always followed by an equal depression. The

physiological action of stimulants is first to raise, then to depress, the energies of the entire system. Stimulants may spur a weary brain, or nerve a feeble arm to undue exertion for a time, but their work is destructive and not constructive. Stimulation means destruction, not added force. Stimulants cannot add one molecule to the plasma out of which our bodies are daily built up. On the contrary, they exert upon the whole animal economy a most deleterious influence. They do not supply, but diminish vital force. They tend to ruin the system by involving the destruction of functions, the activity of which is essential to a healthy life.

ALCOHOLIC STIMULANTS AS MEDICINE.

The habitual use of either fermented or distilled liquors injures, not only the mental and moral faculties, but diminishes the power of the system to resist disease or to recover from its effects. No single habit tends so directly and powerfully to deteriorate the race, and disqualify man for endurance in that struggle for superiority which Nature always awards to the best, the strongest, and the most intellectual. The habitual use of alcoholic drinks diminishes the moral and physical power of the system to an extent to which the majority of the people are not aware.

“Do you mean to say that you do not approve of alcoholic stimulants under any circumstances?” is a question asked us very frequently, and with real earnestness, by physicians and so-called temperance men, who have not yet seen their way clear to total

abstinence. They have many examples to quote of the good done by brandy, wine, whiskey, and beer. In these examples we believe that something else would have answered not only as well, but better than the alcohol. In the case of a patient rapidly sinking, if there was nothing else at hand, we should without doubt administer brandy or wine, but with the firm impression, or rather the knowledge, that the purpose would have been more satisfactorily answered by other remedies. If we found ourselves in a dangerous place with a horse, and no one near to render assistance, we should apply the whip; but once in safety, we should give the tired animal just what it most needed—rest. This is precisely what alcohol, in any form, does to the human system. It is the *lash*; and never, under any circumstances, is it anything else. We believe that there are every day deaths in this city, in cases of fever and other inflammatory diseases, caused by the use of alcoholic stimulants, prescribed by physicians, which would not have occurred had the alcoholic stimulants been omitted.

“What course of treatment have you followed?” we ask a woman who comes for advice.

“I have had several physicians, and taken some medicine.”

“What kind of medicine?”

Sometimes it is sherry, sometimes lager beer, sometimes whiskey, but nine times out of ten an alcoholic stimulant; a whip, a cruel spur, quickening speed and consuming vitality.

The fashionable woman, tired out with late suppers and late hours, consults her physician. He prescribes a mild tonic, and recommends wine two or three times a day.

She is pleased with the doctor's prescription, and so drinks her wine or her beer, and after the lapse of a few months the habit is acquired, the dose increased, and, as more stimulus is required, brandy or whiskey is substituted. The drinking habit becoming confirmed, she takes liquors to such an extent that she is obliged to go to bed to sleep off their effects.

What kind of a state is this which the physician has brought about? Would not a man in the same condition be called *drunk*? Does the doctor inquire about the food taken into this delicate stomach, and about the sleep she loses night after night? Does he speak out his honest thought, and give her a truthful account of his professional diagnosis?

Most assuredly not. Physicians who give the true diagnosis, and propose the removal of the real cause of the trouble, are universally unpopular. We believe that physicians recommend alcoholic stimulants in these cases without fully realizing the evil consequences which are to result; and instead of correcting the unhealthy habits of their patients, and giving mild medicines to remove disease and restore normal action, they lash the tired system into a temporary gallop, and when exhausted Nature makes a last frantic attempt for reconstruction and restoration, on goes the goad again, and the patient dies or becomes a confirmed invalid.

But the evils resulting from the use of alcoholic stimulants do not end here. This habit has become so prevalent at the present day that nursing mothers use liquors to a considerable extent without being aware of the injury done to their own systems by such a practice, or the terrible influence exerted upon their infants. Dr. Edmunds, of London, speaking upon this subject, says, —

“A very large majority of the ladies of my own acquaintance, who are a fair sample, perhaps, of the ladies living in London society, have acquired the habit of using wine, table-beer, stout, and frequently whiskey and brandy, to a large extent, I think, owing to the mistakes on the part of my own profession, in the advice which they have given. The result is, that the babies of the present generation are never sober, from the earliest period of their existence until they have been weaned. This is a shocking statement for me to make, but I should not be doing my duty unless I were to make it as broadly and strongly as that. It is a simple fact. The mother’s blood, practically, is entirely in common with that of the child. You know perfectly that, if a mother takes even an ordinary dose of castor-oil, it will very often affect the baby more than it affects the mother; that one has to be exceedingly careful in prescribing for mothers simply on that ground. Now, what does that simple fact, with which all you mothers are familiar, show? Why, it shows this: that the soothed condition of the body, after the mother has taken half a pint of beer, is really the first stage of drunkenness in that child. When I hear a mother telling me that whenever she takes a little whiskey and water or brandy and water, because the child is fractious, and she finds that her milk agrees with it better, I am obliged to ask her if she knows what she is doing; if she knows that she is simply making herself the medium for distilling into her babe’s system almost the whole of that spirit which she takes into her own; and whether she is aware that that soothed condition of the child is really the first stage of drunkenness. The fact is, the baby is only the infinitely more sensitive extension of

the mother's system ; and it is more likely than any other part of the mother's system to receive the things which are injurious that are taken through the medium of the mother's diet. Well, now, ladies, bear that in mind when you are told to take wine, or beer, or brandy ; understand that you are merely distilling that wine, spirit, and beer, into your child's frame ; that the very mould which that child is to preserve for the rest of its life is being constructed out of blood that is alcoholized — out of a condition of the system in which intoxication is the real, substantial element for the first twelve months of its growth."

But deplorable as the results of this practice may be, however they may affect the rapid increase of drunkenness in our land, they bear no comparison to the terrible influence manifested in the laws of hereditary descent. If the drunken father injured himself alone, if the mother, sleeping off intoxication, wrought no evil except the present, it would be of comparatively small account. They do infinitely worse. They make drunkards, criminals, and idiots for another generation. It is estimated that there are forty thousand idiots born annually in the United States of drunken parents, and idiots *because* of drunken parents. And more than this, there are hundreds of thousands of parents addicted to the use of fermented and distilled liquors, who would scorn the idea of being considered intemperate, and yet who are inevitably perpetuating weakness, and entailing upon children and grand-children an endless heritage of moral, mental, and physical misery. (See chapter on "Hereditary Descent.")

A gentleman who in his youth lived in a country in which the people were much addicted to hard

drinking, frequently took part in their revels. Several of his sons born during this period of his life, although subsequently educated in a very different moral atmosphere, turned out strongly addicted to inebriety; whereas, the children born after he had removed to a large town, and formed more correct habits, were not the victims of this propensity. Another individual, of superior talents, indulged in mischievous revelry at the time of his marriage, but congratulated himself on his subsequent domestication and moral improvement. His eldest son, born in his riotous days, notwithstanding a strictly moral education, turned out a personification of the father's actual condition at that time; and his younger children were more moral in proportion as they were removed from the period of vicious frolics.

A boy was found reeling along the street in apparent intoxication, and was taken to a police station on charge of drunkenness. During his examination the following facts were elicited. He was not drunk, although he had an inordinate desire for liquor. His mind was clear, and his reeling, when walking, was his natural gait. He had all the appearance of a drunken person, and had been arrested several times, but discharged when the facts were known. His father had been a confirmed drunkard, and the boy's physical state was but a transmittal of his father's condition. But not only are physical deformities and a taste for alcoholic liquors transmitted, but the frenzied excitement, nervous, and we may say, demoniacal, disposition of the inebriate father, are perpetuated as *qualities* in the offspring, to urge them into crime and degradation. It is in this direction that an explanation must be looked for, of the barbarous and

inhuman crimes that so shock the public feeling—crimes which show a terribly depraved morality, and a lack of even the most common instincts of humanity.

Hereditary predispositions transmitted by the mother are more frequent, and perhaps still more deplorable. But the subject is too complex to be easily comprehended, and we forbear.

We believe there are few persons addicted to the use of alcoholic stimulants who are not fully aware of their injurious effects, and who would not gladly emancipate themselves from their tyranny had they the courage to break off the associations, and live for a time with an unsatisfied desire. But when we consider the intimate relation of organism between the child and its parents,—that the child often inherits from its parents an unnatural and craving appetite for spirituous liquors,—we cannot wonder at the extreme difficulty of overcoming the habit.

An inherited appetite for liquor may lie dormant for many years without giving the least indication of its presence. But let alcoholic liquors be taken under the prescription of a physician, or even an occasional social glass, and the appetite, so long at rest, may be aroused, and so developed as to become difficult to control. A farmer one day came across a young wildcat, and thinking it would make a pretty plaything for his children, took it home. Time went on, and the wildcat grew up domesticated. It played with the children, and never manifested its natural savage traits. But one day it obtained a piece of raw meat; it had tasted blood, and now, instead of being the mild, purring cat, it was transformed into the savage beast of prey. All the instincts of a wildcat, so long dormant, were developed in a moment by the taste of a

morsel of its natural food. So with the inherited taste for liquor. Years may elapse before it manifests its hidden power; but let the person but taste the intoxicating cup, and the smouldering fire is fanned into a flame; the latent appetite, so long hidden, bursts forth with almost irresistible power, and unless checked in its career, will soon gain the ascendancy, become the master, and sweep the victim downward to a drunkard's grave.

It will thus be seen that the worst effects of alcohol are those which are least observed and least realized as such by the people generally. The daily sights of drunkenness and degradation, the ruin of men, soul and body, are revolting to the public mind and morals. But dark as is the shading of these pictures to the eye, they hardly compare with the silent effects in transmitting to posterity not only a taste for spirituous liquors, but shattered and diseased constitutions, and a patrimony of misery and woe.

We can never compute the mischief done by alcoholic stimulants, nor imagine, in our clearest moments, its dreadful effects upon generations yet unborn. We are almost forced to believe that so-called temperance men — those who do not care for liquors themselves, but believe in their use on exceptional occasions, and see no harm in drinking, if folks do not get drunk — are the greatest hinderance the *bona-fide* temperance cause has to-day. It is upon this class of people that the rum-seller depends to maintain the respectability of the traffic. It is upon this class of people that the habitual dram-drinker depends for the seeming respectability of his drinking habit. It is upon this class of people that the drunkard and the sot lean until they swap them for a lamp-post or something more substantial.

It is upon this class of people that the whole rum traffic depends more than any and everything else; and it is because they hide under this cloak of seeming respectability, that they are so hard to be reached. It is comparatively easy to fight the devil when he steps fairly into the light; but when nothing can be seen but the track of his hoof, the mischief he can accomplish is as irremediable as it is inconceivable.

DRUNKENNESS NOT A DISEASE. — There is no reliable evidence to show that an inherited or acquired habit of drunkenness is a disease, from the thralldom of which the victim has no power to emancipate himself. Disease is a pathological condition of the body, beyond the control of the human will. Its external manifestations may be tampered with, interrupted, and temporarily suspended; but its action is nevertheless continuous and self-sustaining. Hence no man can will himself into or out of a disease until vitality has first prepared the proper condition for its production or elimination. The man who presses the intoxicating cup to his lips, does so by an exercise of his will, and thereby becomes morally responsible for his act. The problem of self-redemption is as entirely within his control as is that of self-abasement in the indulgence of his appetite. There is nothing more demoralizing to a man than to convince him that he has lost his moral liberty, and is a slave to a blind physical necessity. Inebriety is not a disease, but a self-provoked temporary perversion of the natural functions, induced for purposes of sinful gratification. The taste for intoxicating stimulants may be strong, and the mind and power of resistance weakened by long indulgence; but the act of yielding to the appetite is a moral and

wilful wrong. It is not philosophy, not even philanthropy, which sees only disease in vice, crime, and depravity. Such sentimentality, so far from aiding in solving the problem of health, only renders it more intricate, and its solution more difficult. We can pity those who inherit a taste for alcoholic drinks, knowing that they will have a hard conflict in overcoming their besetting sin; but we cannot concur with those who seek to cover vice with a veil of moral unaccountability.

The habitual drunkard needs no treatment for disease except in so far as he may have suffered from derangement consequent upon excessive organic stimulation; he rather needs renewed strength of mind, that he may have the power to resist and overcome the cravings of a depraved appetite; he needs reformation of character, that he may see his moral responsibility, and know that men are never morally enslaved, except by acts sanctioned by their own free wills.

CURE FOR DRUNKENNESS.—Many recipes have been published for the cure of this terrible habit, and yet drunkenness remains; and as we are not likely at present to prohibit the exposure or sale of intoxicating liquors, we would advise those afflicted, or any one who is in any way under its influence, to have some steady employment, and give it strict attention for ten hours each day, except Sunday, and then attend church service regularly. When your day's work is completed, go home to spend your leisure hours with your family, if you have one, if not, in reading good books. If your home is not pleasant, set yourself about the agreeable task of making it so. When you go out to lectures or public amusements, always take some

person of pure mind and steady habits with you. Under this pleasant treatment, it seems to us the sight and smell of liquor must soon become loathsome. If you follow this prescription, and fail to conquer or prevent the fatal habit, nothing but the grace of God can save you.



DRAM-DRINKING.

There was a time in the memory of many of our readers when the use of alcoholic liquors was *supposed* to be necessary to the health of the individual and the well-being of society. They were therefore used upon all occasions, and by all classes of society. But the consequences of their general use became terrible, involving the entire fabric of society. The people at length became aroused, and the subject for a time received perhaps all the attention its importance demanded. Many of our readers will remember the efforts of Mr. Hawkins, of Baltimore, and other reformed men, who lectured throughout the land, and inaugurated the Washingtonian movement. A great reform was the result; but the cause was not removed. During the last twenty-five years the question of the necessity or the propriety of the use of alcoholic stimulants has been discussed in every society, and every element in the problem has been weighed; and all science, as well as all experience, has demonstrated their utter worthlessness to nourish or support the human system. The investigation demonstrated not only the fact that they were useless, but proved that they were absolutely injurious, that their effect upon the body and mind was evil and only evil. With

these facts settled beyond the reach of reasonable controversy, it becomes the duty of every man to support them, and to use his influence to stop the traffic and use of intoxicating liquors. While this problem remained unsolved, every man had, in a becoming spirit, the right to view it from his own chosen standpoint. But now that the subject has been so perfectly demonstrated, any hesitancy in its acceptance can scarcely claim the exercise of charity. Side influences may cause the needle to veer, or the planets to leave their prescribed paths; but the magnetic pole, or the planets' settled orbits, are not changed by the momentary influence of the hour. Men, if they will allow themselves to be warped by unworthy motives, may swerve from the path of duty; but the law of right loses none of its claims; and if men will prove untrue to the demonstrated duties of life, their accountability becomes fearful.

In the temperance question, as it now comes up for final settlement, every man owes it, alike to himself and to society, to act in good faith. Whatever may be his taste or his interest, he is bound to the facts before him, and the conclusion reached by the evidence in the case. Whatever may be his surroundings, however the elements of wealth may be disturbed, or the heavens overcast, uncompromising adherence to the line of right is the duty of every man. The temperance cause certainly has nothing to fear in the conflict. Behind the battlements of truth and right it can stand firm, while, in the weakness of unpardonable guilt, the whole traffic and use of alcoholic liquors stand condemned by an unalterable sentence.

However much people may differ with regard to the propriety of prohibitory laws, it is certainly the im-

perative duty of every friend of temperance or reform to stand firm for the right, and not only to unveil the evils of intemperance, but to hold up the crime of the traffic in the very focus of observation, stripped of all support of law or public sympathy, and of all disguise, till it shall be driven from every land, or remain, if it must, under the condemnation of every lover of his race. We have faith in the efforts of the whole people in every reform, and in every good work; and we hope and expect, by a united effort against this worst of all evils, to see a public sentiment created that will force the rumseller to abandon the traffic, or show him that contempt which will drive him from respectable society. We speak with the utmost freedom upon this subject, using words to convey ideas and illustrate principles, and not to please rumsellers, or to cover up their crimes. We do not believe that any man has any claim upon society to be considered respectable, who, in the light of the present day, continues a traffic which destroys the respectability of others, and which has been demonstrated to be only evil, and prolific of the most unutterable woe.

We believe that every community has the right, and should exercise the right, to protect itself and all its subjects by law, if need be, from every vice, as well as from the more heinous crimes, and against anything which promotes vice and degrades the people; and there is nothing in the catalogue of human infirmities which stand out so prominently as that of dram-drinking. It is the most prolific source of crime, poverty, and wretchedness, and it should be suppressed by any and all means in our power. The dram-shops and the saloons are not only a constant invitation to the young, but a terrible temptation to those whose

drinking habits are fixed, who are controlled by a morbid appetite which they are powerless to resist while exposed to such influences. We fear the keepers of the numerous dram-shops do not every morning repeat the prayer, as commended by our Saviour, "Lead us not into temptation." It seems to us that they are assuming a fearful responsibility, and we would refer them to the old German proverb, which says, "A man who takes soup with the devil needs a long spoon." And this is especially true of those engaged in occupations which thrive upon the miseries of their fellow-men.

They dream of prosperity, and count up their present gains, but eventually find that their soup-spoon was too short. Almost every liquor-shop and distillery in the land can furnish instances which will illustrate this fact. No man has a moral right to engage in any business, the success of which involves the ruin of others; and the man who enters into such an occupation takes an awful risk. The tears of orphans, the prayers of widows, the curses of victims, and the displeasure of God hedge him in on every side. Let the wise beware. Let the prudent foresee the evil, and hide from its approach. No business can prosper long beneath the "woe" of God and the curse of men.

CHAPTER V.

NARCOTIC STIMULANTS.

TOBACCO.

WE do not wish to magnify the evils arising from the use of tobacco; but certainly it is a habit that does not commend itself to those who regard cleanliness as being next to godliness. But the evil does not end with its filthiness. The use of tobacco weakens the nervous system, blunts the sensibilities and intellect, and subjects the whole system to a process of slow deterioration.

Leading scientific men in France, and eminent teachers, unite in the opinion that the use of tobacco is most pernicious to students, and sows the seeds of many fatal disorders. It is interdicted, if we mistake not, in the Polytechnic School. One of the members of the Academy of Medicine, in a very elaborate paper, drawn up with great care, asserts that "statistics show that in exact proportion with the increased consumption of tobacco is the increase of diseases of the nervous centres—insanity, general paralysis, paraplegia, and certain cancerous affections."

Many of its devotees are ready to acknowledge that its use is injurious to both body and mind, and are inwardly ashamed of themselves for continuing the habit, and would gladly break themselves of it if they

had the courage to live a short time with an unsatisfied desire. But habit has chained them, and they continue the filthy practice ; and boys, thinking it manly to imitate them, contract the habit only to regret in after years.

Smoking is considered by many the most genteel mode of using tobacco ; but it is undoubtedly the most injurious. Besides the narcotic effects peculiar to tobacco, its smoke contains a large amount of creosote, a principle common to all smoke. Creosote is an active poison, and is used by dentists to destroy nerves in decayed teeth. In its crude form it is found in the funnels of stoves and furnaces ; and where they pass through cold rooms, it is often condensed in such quantities as to destroy the funnel in a single season. The smoke of tobacco being drawn in by the vital breath, its influence is almost immediately felt in every portion of the lungs and brain. The blood imbibes the narcotic and poisonous principles, and they are carried immediately through the whole system. The use of tobacco by young people tends to dwarf them physically, mentally, and morally. But its worst effect is least known and least noticed : it is its silent destruction of the system by poisoning the great nervous centres, and finally transmitting to posterity a tendency to nervous diseases. (See chapter on "Hereditary Descent.")

The Turks, and many of the people of Eastern nations, saturate themselves with opium and perfumes, sleeping away their time in torpor, indolence, and sensuality. They narcotize, but do not nicotize themselves ; and if opium is the poison of the intellect of the East, tobacco in our own country may prove the poison of life itself. It is evident that paralysis, dis-

eases of the heart and nervous system, are making rapid advance under the use of this narcotic. It is certain that there has been an enormous increase of insanity and diseases of the nervous centre among our people; and wherever the history of such cases has been examined, in asylums and hospitals, or in private practice, their connection with the use of tobacco has been obvious.

Soldiers and sailors, whose abuse of tobacco is most flagrant, are the most numerous classes in these hospitals, and their cases are the most incurable.

Tobacco is not food. It does not make blood or muscle; and its use has become a terrible, blighting curse.

Mr. A., aged about fifty, a prominent business man in this community, has been incapacitated for business for several years, from the effect of tobacco upon his nervous system. He has been under the treatment of the most celebrated physicians, and has visited different parts of the country for his health, spending several winters in the south; and every means that the best medical advice could bestow, and wealth and influence could procure, have been lavished upon him in vain. He is still in the same deplorable condition, his nervous system being shattered, solely on account of the continued use of this narcotic poison.

We have constantly, in our practice of many years, had the terrible influence of this poison to contend with in the treatment of chronic diseases, and find it one of the worst enemies to recovery, a most potent agent against the establishment of healthy action and the regaining of the wonted power of mind and body. In advising persons to discontinue its use, we are often confronted by some of their robust friends, who de-

clare that they have used it for twenty years, and yet retain their health. This does not argue in favor of the use of tobacco. It is injurious to all; yet in the indulgence of the appetites, much depends on the constitution and habits of the person. The amount of tobacco that may be taken with comparative safety by the common laborer in the open air, or those in whom the physical system predominates, would soon undermine the health and ruin the nervous system of the student, or those in whom the nervous or intellectual faculties predominate.

Persons who are constitutionally adapted to intellectual labor find that excessive brain-work is exhausting to the vitality of the system. Hence many poets, authors, and orators have been led into the foolish habit of stimulating their brain for the time being, to accomplish some great success. But success so obtained is always at the expense of the constitution, and we find such persons breaking down in the heyday of life. Clergymen are not wholly exempt from this fatal practice; and though there may be some in the clerical profession whose vital force is so strong that they may partially succeed in the ministry, and maintain apparently good health, under the use of this weed, we would recommend them to consider whether their constitutions are not better adapted to rural pursuits. We believe facts will warrant the assertion that no person with a predominance of intellect and nervous excitability necessary to adapt him to the work of the ministry, can long sustain faithful labor under the baneful influence of tobacco.

A late issue of the Watchman and Reflector gives an account of the departure of an ex-Congregationalist preacher. The writer describes him as a fine-looking

man, in the maturity of his manhood, who was a noble specimen of our best New England clergymen. He was a pastor in Connecticut, and was much beloved and respected by his hearers. But his brain gave way ; he found his nerves would not permit him to go on in his holy vocation, and he retired from his pulpit, and went to Vineland for the benefit of his health ; and he was there regarded as one of the best Christian citizens. He looked hale and hearty ; it was the mind that was shattered.

One of the doctors remarked to him one day, —

“ Mr. T., why do you not follow your vocation, and preach the gospel ? You look competent to the task.”

“ O,” said he, “ I cannot do it. I cannot compose a sermon. My mind will not permit continuous thought. This is what keeps me from the work.”

In reply, the doctor said, —

“ Allow me to say, then, in all frankness, that this chaos of the mind is the result of your free use of tobacco ; and you may expect, as the next result, paralysis, which will wholly use you up.”

He admitted that this might be so, but could not and would not pledge himself to abstinence. The will-power of the mind was too far gone to cope with and break the binding chains of this miserable slavery. He continued the use of the weed, and within a few months a paralytic shock was experienced ; the body and mind at once fell into ruin. He lingered for a year or more, and died.

Now, what destroyed this worthy, good man, drove him from the pulpit, and hurried him to the grave in the zenith of his manhood and capabilities ? Not too much study, nor too much brain or heart work ; but that deadly poison, *nicotine*, found in tobacco.

After many years' observation, we are satisfied that more ministers are broken down, more minds are shattered into chaos and nervous irritability by narcotics, opiates, and dissipating stimulants, than by fasting, prayer, and earnest work. The body and the mind are made for work; they will bear much hard, earnest, and steady labor; but the nervous system is delicate and complicated, and will bear but little abuse, and when goaded on to desperation by stimulation, will be sure to make reprisals.

We remember a young and enterprising man whose mind gave way under the influence of tobacco, so that he was incapable of continuous thought, even while in college. Leaving off its use for a time, his health rallied so far as to permit him to pursue his studies. After his collegiate education was finished, he decided to prepare for the ministry, and entered a theological school. But returning to his old habit, his mind again became impaired. After struggling for years to complete his education, he finally entered the ministry. But as the habit was still upon him, his health gave way, and his mind became again in the same deplorable condition. He consulted many physicians, with only temporary relief. We informed him that he could not recover the tenacity of his mind and continue the use of tobacco. He took medicine to clear the secretions and eradicate its effects from the system; but he did not follow our instructions. We met him a few months after, still struggling under the terrible influence, apparently unable to break himself of the pernicious habit.

We might cite thousands of cases of men of talent and culture in a similar condition, men who are fully aware that their misery is the result of the use of

tobacco ; and yet their bodies, minds, and wills are apparently so under the influence of this narcotic poison that it seems as if nothing but the grace of God could restore them.

We are informed that the use of tobacco is as common in the Southern States among the ladies as among the gentlemen, nearly every person using it in some form or other. And it has been more than hinted that the ladies of New England are not entirely exempt from the practice of using this weed, which is poisonous in its nature, and better adapted to the destruction of insects on cattle, and bugs on plants, than coloring the teeth, poisoning the breath, and shortening the lives of the fairest portion of creation.

Snuff-taking has been in the past the most fashionable way of using tobacco among the ladies, and used to be recommended by physicians to clear the head. And we think it has been successful in "clearing the head" of the most brilliant ideas. But this is not the only evil arising from its use. The intricate organization and delicate fibrous lining of the nostrils, which are intended to warm and purify the air in its passage to the lungs, and which are so necessary to their protection, are often broken down and destroyed by the use of snuff. The cavities of the nose and head are thus left enlarged, the bones bare, and the condition of the organ otherwise so changed as to make the speech sound as if the nose was made of bell-metal.

But ladies of the present day, not content with taking snuff, indulge in "fine cut" and "sweet navy," and some of them, we understand, smoke strong cigars.

Owing to the less hardy constitution and more delicate organization of woman, the effects of tobacco are

more rapidly destructive to health and fatal to life than in man. But the evils of the use of this weed do not stop with the shattered nerves of the person using it; but its more terrible effects are poisoning the great nervous centres, and transmitting to posterity a tendency to diseases of the nervous system; and it would not take much of an anthropologist to discern in the children of to-day the consequences of these terrible habits in their progenitors.

It is said also that after the habit has become once fixed, it is far more difficult for a woman to break it off than for a man to do so. However this may be, it is sad to view persons in the vigor and prime of life so bound by habit to the use of this filthy weed as to be unable to break the chains which hold them in servitude, even to save health and life; unable to assert the dignity which should characterize every human being, and rise above a depraved and perverted appetite.

It is evident that the extent of the evils arising from the use of tobacco has not been properly understood by the people who use it, or even by those philanthropists who have raised such a tirade against it.

Tobaccó often creates a desire for the use of alcoholic drinks; and the great prevalence of a craving thirst among inveterate smokers can be traced directly to the effects of tobacco upon the lungs and brain; and because its action is on those organs, and not on the stomach, the liquors that are drank do not alleviate the thirst, but often aggravate it. These facts are worthy of attention; and it is time that medical men, and reformers generally, should give this subject more than a passing notice.

To sum up, then, the arguments against the use of tobacco: —

The habit is at war with temperance. Tobacco is an intoxicant; it is a part of the merchandise of dram-shops, and an incentive to drunkenness. The toper, rebuked by a professed teetotaller, with a quid or a cigar in his mouth, might pertinently respond, "Physician, heal thyself."

The lips of a tobacco-chewer, or habitual smoker, are swelled and saturated with a disgusting poison, the gums are spongy and tender, and the whole mouth and throat affected by its use.

The habit of using tobacco is inconsistent with the character of a Christian gentleman. It cannot be considered genteel to poison the air with sickening smoke, or deluge the floor with liquid filthiness.

The habit injures the voice. The smoker articulates huskily. The chewer often croaks. The snuffer speaks through his nose.

The habit is costly. Official statistics show that more money was spent for tobacco in the United States, during 1871, than for bread, the staff of life: three hundred and fifty million dollars for tobacco in its various forms; two hundred million dollars for flour within the year!

The habit often lowers the self-respect of those who practise it. "I love my pipe," said a clergyman, "but I despise myself for using it."

The habit disturbs the regular pulsation of the heart. Tobacco-users are thus in constant danger.

The habit weakens the mind. It enfeebles the memory, paralyzes the will, produces morbid irritability, diseases the imagination, deadens the moral sensibilities, and is therefore an injury to the nervous system, the intellect, and the soul.

The habit is a rebellion against conscience. Those

who indulge in it know that it wastes time, money, strength, and life, and tramples on the laws of Nature, which are the laws of God.

The habit is contagious. Every mature smoker or chewer infects others with a desire to follow his pernicious example. Thus the evil spreads.

Bondmen of tobacco, break your chains! After a season of abstinence you will not care for the poison, and when your system is once emancipated, you will be more of a man, and loathe the filthy habit. It is God's command that you do yourself and your posterity no wilful harm. For this reason, added to those already placed before you, give up the use of tobacco forthwith and forever!

OPIUM.

Recent statistics of the extent of the traffic in opium, and of its importation into this country, are calculated to excite alarm as to the future. It appears that the Chinese pay for their opium nearly as much as they receive for their teas, and more than they get for their silks, and that the drug is nearly half the value of their total imports. Its demoralizing influence in that empire is well known; but when we learn that the importations of it at New York have increased from 59,393 pounds in 1867 to 265,513 pounds in 1874, and adding to this an equal amount for importations at other ports, we may well ponder the consequences. It is estimated that only one third of this immense quantity imported is used for medical purposes. The probability that the remainder is employed as an unnatural stimulus should nerve the friends of temperance to combat a practice which is so insidious and deadly in its effects.

An inquiry among druggists reveals the fact that there are in New York city alone about five thousand confirmed users of opium in its various forms of sulphate of morphia, laudanum, and in the crude state. The ranks of these inebriates embrace all classes of society. The drug is sold by many respectable druggists over the counter without a physician's prescription, but as a general thing only to known and regular customers, who have become thoroughly used to it. Sometimes a stranger can get it, but it is only because his appearance unmistakably indicates that he is an opium-eater.

"You can always tell them," said a worthy druggist. "There's something about their complexion and eyes, and about their nervous manner, that always reveals the condition to which the habit has degraded them."

Sometimes the unfortunate, brought to a low ebb by the cravings of the horrible appetite, will steal all the opium he can find. The appetite destroys all moral sense, as surely as it ruins all the physical faculties.

It is estimated that there are thousands in Boston in the daily habit of using morphia, opium, or laudanum, for the purpose of intoxication. Opium, in its crude state, is sometimes bought, and greedily eaten, on the spot. "They chew it," says one druggist, "as you would wax." The crude article, however, is not the favorite form of the drug among the confirmed opium-eaters. The action of morphia is much more rapid in its effects upon the system. The principal desire of the inebriate is to betake himself, as soon as possible, to the gorgeous land of fancies, to which morphine at once transports him. Sulphate of

morphia is the favorite form of the drug, and it is in this state that devotees mainly use it. Some of the doses taken by the "sots" are enough to kill half a dozen men innocent of the habitual use of it. One lady, some time ago, bought ten grains of it, and took it before leaving the store. A well known old gentleman is said to be in the habit of taking twenty-five grains of it daily.

Numbers of wealthy people, doubtless, buy the article at wholesale, and thus avoid the necessity of frequent applications for it at the druggists. In this way, also, they prevent the possibility of any very close calculation as to the number of opium worshippers.

The most painful consequence of the use of opium is, that it so soon establishes its iron rule over the system that very early any deprivation of the wonted supply may induce indescribable suffering. Persons addicted to this habit find they have entered the slavery of a master whose gripe is anguish, and to escape from whom is to be griped more tightly than ever. They may for a time, perhaps, be free from acute bodily suffering under its effects, and may imagine that they are happy, but their condition is unnatural. Refreshing sleep becomes to them a thing of the past. Farther on in this downward career the victims lose all relish for social enjoyment. Their moral sense becomes deranged and diseased. Conscience ceases to control. Insanity at last becomes the condition of the mind, and morally and physically they are wrecks. Worse than this, the deleterious effects of the habit extend to posterity, and the sins of the parents are visited upon the children, even unto the third and fourth generations.

“The influences of opium are very pernicious. They weaken the will, and make a person a colossal slave to a tiny tyrant; they shut him up, like the genii in the Arabian tales, in a phial with dusky fire; they spread a torpor over the energies of his body; they close up or poison the natural sources of enjoyment; and he loses the charm and influence of the air, the light, the sunshine, the breezes, and even the stern scenery of night arises like a desolate temple round his ruined spirits. If his heart is not utterly hardened, it is owing to its peculiar breadth and warmth. At last his studies are interrupted, his health impaired, and then comes the noon of his night; a form of gigantic gloom, swaying ‘an ebon sceptre,’ stands over him in triumph, and it seems as if nothing less than a miraculous intervention can rescue the victim from its power.”

It may be asked, What is the remedy for these terrible consequences? We answer, those who have become addicted to the practice must stop it forever. But the main hope is to be looked for in preventing its use among those who are as yet innocent of the habit, by showing them the terrible evils consequent upon such a practice, and the destruction of mind and body which the use of this drug inevitably entails.

How much of such evil entailed upon the human race can be traced to the prescriptions and influence of the medical profession may perhaps never be known. But it is known that opium in some form enters largely into the prescriptions given for almost every form of disease. We believe a large majority of opium-eaters can trace their ruin directly to their physician.

Nurses, as well as physicians, are in the habit of carrying this drug in some form about with them, that

when the little ones under their charge manifest the least restlessness, or disposition to exercise their lungs, they may, by this unnatural and criminal means, stupefy their senses, thus saving much trouble.

Another fruitful source of this habit is found in the custom of using the opium found in various cordials, soothing sirups, and other nostrums with which the land is filled, and God only knows how great a wrong has been in this way perpetrated on humanity. We hope soon to see the medical profession free themselves from this error in practice, and from all participation in forming the habit of opium-eating or dram-drinking.

CHAPTER VI.

SLEEP.

As daylight and darkness is the unalterable law of Nature, so, in harmony with this law, we find motion and rest, activity and repose, essential to our existence. As all motion implies waste of substance, the continued activity of body or mind would soon wear them out if there were not some means provided for their restoration.

Thousands of busy people ruin the health, and many die every year, for want of sleep. It may be that some are injured by too much sleep; but, an excitable people, and in those of intense business habits, there is far more mischief done from want of sleep. Sleeplessness often becomes a habit, and is very injurious to health. It sometimes results from disease, showing unmistakable evidence of a breaking down of the mental powers, and is often a precursor of insanity. When it does not reach that sad result, it is still full of peril, as well as of suffering. Thousands of men have been indebted for bad bargains, for lack of courage, and ineffectiveness, to loss of sleep.

It is curious that all the popular poetical representations of sleeping and waking are the reverse of the truth. We speak of sleep as the image of death, and our waking hours as the image of life. But the activity is the result of some form of decomposition in

the body. Every thought, still more every motion, or volition, wastes some part of the nervous substance, precisely as flame is produced by wasting the fuel. It is the death of some part of the physical substance that produces the phenomena of intelligent and voluntary life.

On the other hand, sleep is not like death ; it is the period in which the waste of the system ceases, or is reduced to its minimum. Healthy and natural sleep repairs the wastes which the waking hours have made. It rebuilds the system. The night is the repair shop of the body. In the relaxed condition of the system during natural sleep, every part is silently overhauled, and all the organs, tissues, and substances are replenished. Waking consumes, sleep replaces ; waking exhausts, sleep repairs.

The perfect adaptation of means to ends, and the economy which is manifested in all nature, is beautifully shown in the processes by which this renovation of the system is carried on. The amount of vital force necessarily expended in the labors of the day is, during sleep, employed to increase the involuntary processes ; thus, the functions of the nutritive system are carried on with more vigor ; the circulation of the blood and other fluids of the economy is greatly facilitated. The diminished action of the ganglionic nerves of motion and sensation affords an increased supply of cerebral stimulus to the secretory and excretory organs, and the waste and worn-out particles are, during sleep, thrown off from the system in greater profusion ; while, at the same time, the process of rebuilding the system goes on with increased activity. In this manner the system is at night renovated and prepared for the labor of the ensuing day.

We live by a process of destruction. Force in the human body is manifested by the decomposition of its component particles. Life manifests itself as a result of chemical decomposition of particles, and as these particles or cells are destroyed and devitalized, they must be removed, and their place supplied by new cells.

During the daytime the amount of vital force expended counterbalances, or rather uses up, the material prepared by digestion and assimilation. But at night, when the expenditure of force in voluntary life is at its minimum, not only is the blood freed from the impurities of worn-out and broken-down particles, but new tissue is formed, and the body gains in weight. We grow mostly during sleep; for then the products of nutrition, which during the day are used in replacing the constant waste of the system, are employed in building new tissue. A child has little activity, and consequently excretes little; he eats and sleeps far more in proportion than the adult, and this surplus of nutrition is expended almost entirely in building up, or growing.

That the system may be properly repaired during sleep, the material must be received and digested during the day. Food to be in a proper condition to supply and rebuild the system, must be taken and digested during the waking hours.

That digestion may go on during sleep cannot be doubted, as any organ of the economy may, for a time, be forced to perform more than its normal amount of labor. But the stomach, after being kept constantly working during the day, requires rest at night, and can be recuperated only during the hours of sleep; and although digestion may go on, such

sleep will be disturbed and unrefreshing. Thus by a reciprocity of action, both are rendered imperfect and unsatisfactory.

The brain and nervous system are also built up and restored only during sleep.

The man who sleeps little repairs little ; if he sleeps poorly, he repairs poorly. If he uses up in a day less than he accumulates at night he will gain in health and vigor. If he uses more by day than he gathers at night he will lose. And if this loss be long continued he must succumb. A man who would be a good worker must see to it that he is a good sleeper. An eminent divine has compared human life to a mill ; sometimes the stream being so copious that one needs care but little about its supply. Often the stream that turns the mill needs to be economized. A dam is built to hold a larger supply. The mill runs the pond pretty low through the day, but by shutting down the gate, the pond refills, and the wheels go merrily round again the next day.

A man has as much force in him as he has provided for by sleep and the proper assimilation of food. The quality of action, especially mental activity, depends upon the quality of sleep and nutrition.

Such being the necessities of the case, and the inexorable law of Nature, it behooves us, as rational beings, to study and obey the laws that govern our physical and mental organization. The importance of sleep, as a recuperative agent, has been almost entirely overlooked ; and many, even among the learned, act as if they thought sleep of but little consequence, and the time so spent lost. But Nature has decided otherwise. The integrity of neither body nor mind can be long maintained without sleep. Health, happiness, strength

of mind, and personal beauty are as dependent upon sleep as upon any other requirement of the animal economy. When the whole organization is in a normal condition, and becomes wearied, "Tired Nature's sweet restorer, balmy sleep," steals over us almost unconsciously: our systems are renewed, and we awake to new life and joy. But when the mind is overtaxed, and the body invaded by disease, sleep often refuses her aid, and the whole system begins to languish. If the disease is removed, and the system again brought into harmony, sleep comes to our aid, and health is restored.

The time spent in sleep is not, however, a true measure of the amount of rest, for sleep varies much in the degree of its completeness or intensity; there is a slumber so disturbed that we are unrefreshed by it; and a sleep so profound that we awake weary. Such conditions of the system are the result of physical disease, or some inharmony of mind and body, and should warn us of approaching danger, which should demand immediate attention.

But as sleep is an absolute necessity of our being, and as nothing can compensate us for its loss, it becomes a duty to provide for ourselves, and those under our care, the best possible means for supplying the needed quantity of refreshing and undisturbed sleep. But how to effect the object is to many of us a matter of the highest importance. Sleep may be characterized as an involuntary or passive state of the mind and body, and although a necessity of our being, is not directly under our volition or control. It cannot be induced by any active or positive state of the will; it is only when the whole system is in an harmonious state, when every obstacle to it is removed, that it

steals over us spontaneously, and under its influence we receive that recuperation so essential to our being.

To induce sleep, the recumbent position is most favorable, as this facilitates the circulation of the vital fluids. The head should be but slightly elevated above the level of the shoulders. The eyes, in their natural and fixed position of sleep, are slightly inverted, or rolled upward. This position of the eyeballs, if not strained and artificial, will aid in the induction of sleep.

The great obstacle to sleep is a want of ability to suspend active thought. Various methods have been devised to effect this object, such as counting, &c., but they only change the direction of the thought.

It is evident that those who do the most brain-work require the most sleep, and yet they are the ones most likely to suffer from the want of it. They often become nervous and wakeful from continued mental effort, necessitating a constant pressure of blood upon the brain, which keeps it in a stimulated and wakeful state until the pulsations in the head become absolutely painful, and the wear and waste of brain and nerve become excessive and prostrating. In this excited condition of the brain it is impossible to sleep. It is, therefore, necessary to stop all excitement, and endeavor to induce a condition of repose. Failing to produce this quiescent state, active means should be adopted to harmonize the system, by withdrawing the pressure from the brain, and equalizing the circulation. This may be accomplished by arising and chafing the body and extremities with a brush or towel, or rubbing smartly with the hands. When there is too much excitement of the brain to be overcome in this manner, a cold bath, a sponge bath with brisk rubbing, a rapid

walk in the open air, or any active exercise, will aid in equalizing the circulation and promoting sleep. These rules are simple, and easy of application, and may minister to the comfort of thousands who would freely expend money for an anodyne to promote sleep.

Health and long life are almost universally associated with early rising; and we are referred to the testimony of old people as evidence of its good effect upon the general system. But it should be remembered that early rising, to be beneficial, must have two concomitants;—not only must we retire early, but the brain must be free from excitement, and the system must be in a condition favorable to repose.

One important advantage of retiring early is, that the intense stillness of midnight and the early morning hours favors that unbroken repose which is the all-powerful renovator of the tired system. Without, then, the accompaniment of retiring early, “early rising” is positively mischievous. Every person should be allowed to “have his sleep out;” otherwise the duties of the day cannot be properly performed, and will be necessarily slighted, even by the most conscientious.

As sleep is the only provision in Nature for resting the tired muscles, and rebuilding the exhausted brain and wasting nerves, going to bed is, therefore, one of the most important acts of our life, and should always be done well, and with a desire for sleep, for quiet repose, and for perfect rest of both body and mind. We must not go to bed with an overloaded stomach, nor in an anxious or troubled state of mind. The body should be warm, and the whole being should be in harmonious action. Attention to all these conditions should be followed by such devotional exercises

as will bring all the feelings, emotions, and sentiments into accord with the divine will, subduing passions, removing hatred, malice, jealousy, revenge, and opening the portals of heaven to all who seek rest, peace, and sweet repose. It is a happy custom with many to conclude the evening's proceedings by singing a sweet hymn, — "The day is past and gone," for instance, — which tends to bring all present into delightful union with each other, and with "Our Father which art in heaven."

In infancy and early childhood, while the functions of nutrition are most active, and the waste of the system is small, nearly the whole time is passed in eating and sleeping, and building up or growing. During adult life about one third of the twenty-four hours is passed in repose. In old age, when the nutritive operations are carried on with less vigor, more sleep is needed, so that the system may be spared as much as possible.

Every man must sleep according to his temperament. But eight hours is the average. If one requires a little more or a little less, he will find it out for himself. Whoever by work, pleasure, sorrow, or by any other cause is regularly diminishing his sleep, is destroying his life. A man may hold out for a time, but Nature keeps close accounts, and no man can dodge her settlements. We have seen impoverished railroads that could not keep the track in order, nor spare the engines to be thoroughly repaired. Every year track and equipment deteriorated. By and by comes a crash, and the road is a heap of confusion and destruction. So it is with men. They cannot spare the time to sleep enough. They slowly run behind. Symptoms of general waste appear. Prema-

ture wrinkles, weak eyes, depression of spirits, failure of digestion, feebleness in the morning, and overwhelming melancholy — these and other signs show a dilapidation. If now sudden calamity causes an extraordinary pressure, they go down under it. They have no resources to draw upon. They have been living up to the verge of their whole vitality every day.

It is a kind of dissipation for men to overwork their system every day and undersleep every night. Some men are dissipated by physical stimulants, and some by social, and some by professional and commercial. But a man who works excessively all day and sleeps but little at night, is guilty of a direct violation of one of the fundamental laws of his being, and must sooner or later pay the penalty.

What shall we *do*? This to many is a very important and serious question. The trouble is undoubtedly the result of a diseased condition. Sleepless people should court the sun. The very best soporific is sunshine. Therefore, it is very plain that poor sleepers should pass as many hours as possible in the sun. Many people are martyrs, and yet they do not know it. They shut the sunshine out of their houses and their hearts, they do all possible to keep off the subtlest and yet most potent influence which is intended to give them strength, beauty, and cheerfulness.

Eat regularly, and not too much, and always secure a good digestion, that good material may be in readiness for repairs. Retire at an early hour, to give time for rest; sleep in a cool and airy room. No person can sleep well, or remain healthy, who breathes confined or bad air. Keep the skin clean and active. Always dress so as to keep the body comfortable and warm. Take proper exercise. Observe all the hy-

gienic laws, and preserve a clear conscience. If this does not afford you sound, refreshing sleep, and a reasonable degree of health, you should consult a physician who has not only a knowledge of disease and the human system, but a little practical common sense, and he will see what is required to remove obstructions, and eradicate the disturbing cause. By this means harmony will be restored, sleep will come to your relief, food will be properly assimilated, and health will be restored.

DREAMS.

It is admitted by all physiologists that the upper regions of the brain are those which minister to the higher mental operations—consciousness, volition, and reason; while the basal portions are more immediately connected with the operations of life. The necessity for sleep is the rest of the nerves and the recuperation of the tissues which have become deteriorated by their functional action during the day, which is often carried on to such an extent as to interfere with the higher and more complex cerebral operations, and which necessitates protracted rest for the recovery of the nutritive balance. Dreaming cannot be regarded as a normal or healthy accompaniment of sleep, but as a result of the abnormal or imperfect condition of the organ of mental action. In the natural and harmonious condition of the system we should pass from wakefulness to complete unconsciousness, and *vice versa*, almost instantaneously, and many persons do so. But more frequently the transition is protracted, and stages are observed in which the sleep is but partial. The

cerebral organ being in an imperfect state, its action is imperfect, and the first effect of the lessening of its vital force is a loss of the highest form of mental power—the control over the mental operations. This requires the highest mental effort, and is most easily lost. In this condition the thoughts ramble unchecked, chase one another confusedly over the mental field, and give rise to all sorts of incongruities of the imagination. At the same time, being unrestrained, they are excited, and evince efforts of memory, and even of combination, of which in the regulated state of wakefulness they are quite incapable. In this way the images of persons and places, events and items of knowledge, long forgotten in the ordinary state, are recalled with distinctness. And many new ideas and scenes cross the field of mental vision during these strange phenomena which might never have been thought of in our wakeful moments.

CHAPTER VII.

BRAIN-WORK.

BRAIN-WORKERS, either young or old, require more nutrition, and more rest and sleep, than mechanics and laborers, because labor of the brain causes a greater waste of tissue than labor of the muscles. According to the estimates of Professor Houghton, three hours of hard study produce more important changes and waste of tissue than a whole day of muscular labor. The brain being the organ of the mind, and the noblest organ of the system, receives a greater proportional amount of blood than any other part, and is, therefore, correspondingly affected by overwork, and by the quantity and quality of nutrition which the body receives. Hence the importance of strict attention to diet, sleep, exercise, and hygienic laws in general. If, then, it is true that brain-work exhausts the vital forces, and wears out the nerve-powers of the system faster than severe physical labor, that the exercise of the brain requires in the way of nutrition, relatively, a much larger proportion of blood and vitality than other organs, then close and continued application of the mind for six to eight hours each day, for scholars of weak and excitable nerves, must necessarily overtax the brain, dwarf the body, and lead to many sad results.

It is a fact worthy of consideration that many of

the diseases among students in our public schools, as well as in our colleges, are traceable to over-taxation of the mind. The brain, like the stomach, can sustain a certain amount of work, and gain strength and vigor. But if crowded by overwork, nervousness and general ill health must be the inevitable result. Excessive mental labor in the young also retards physical growth, and induces conditions of the system which are alike pernicious to the highest development of mind and body. The amount of vital power or endurance has its limits; and the result of long school hours in students of a nervous temperament is an overtaxed brain, a dwarfed body, a weakened intellect, a predisposition to disease, and a premature grave.

Brain-workers should exercise all the other organs of the body as well as the brain. Even the most secluded bookworm must use his muscles to some extent, or suffer the penalty; and the great majority of literary and professional men are forced to take systematic and vigorous exercise in order to keep their brains in good working order. On the other hand, the uneducated and laboring classes, while they toil with their hands, as their daily necessities require, are apt to let their brains lie idle; and thus the most important part of their nature undergoes comparatively little change, except that which comes from time and disuse.

Brain-workers, as a class, are more active than mechanics or laborers. The literary man need never be idle, for his thinking powers, the tools of his trade, are always at hand. The mechanic has a definite task assigned for certain hours, and when that is over he feels free to rest. On the other hand, the powers of thought and composition are only inter-

rupted by sleep ; and the intensity of the labor is measured by mental discipline and power of endurance.

We sometimes ask ourselves how it happens that the man with the hoe will labor eight or ten hours a day with less fatigue than the man with the pen will toil his three or four. Hugh Miller was a great worker with hoe and pick, and would have made a good hand in a slate quarry, in grading a railway, or digging a canal. But one night, as you know, he shot himself while in a fit of nervous fever. What was the difference between the geologist and a laborer with his hoe ? Simply this : the former was a worker of brain, and the latter of muscle. Let the man with the hoe lay down his husbandry for a little while, and study the material structure of the hills, and very likely he would soon learn what it was to lose one's appetite, and hear the clock strike nearly all the night hours in feverish wakefulness. Thus we get at a great organic law of being, to wit, that brain-work subtracts vitality from the fountain, while muscle-work only makes drafts upon the ramifying streams of life.

The practical inferences then, are, that brain expends its energy and itself during the hours of wakefulness, and that it is recuperated only during sleep ; that those who do the most brain-work require the most sleep ; that time saved from necessary sleep is infallibly destructive to mind, body, and estate, and great Nature will never fail to punish every violation of these great laws.

HINTS TO BRAIN-WORKERS.

As there is no kind of employment so exhausting to all man's faculties as steady brain-work, it should ever be a study with us how we may husband our

energies, and prevent that strain upon our powers which is breaking down so many in professional life. Any means or agencies which will save wear and tear should be eagerly seized upon. While the brain-power is exhausted by thought, the manual labor of writing is wearisome to the flesh. Journalists, ministers, and lawyers often postpone, and then never accomplish, intellectual tasks, because they have not the physical power to undertake them. The employment of an amanuensis to perform the manual work of writing while one dictates is a great saving of energy. Any person who has not tried this plan would be agreeably surprised to find how much assistance it affords. Very often a professional man feels too weary to resume the pen and finish some literary task which is urgent. Then is the time when he should draw back in his easy-chair, or take a comfortable attitude elsewhere, and dictate to an amanuensis. After a little experience, one will find that he can thereby accomplish almost twice as much, and with far less exhaustion. The attention is not divided as when one writes himself. With nothing to divert the eyes, a person can, if necessary, close them, and closely concentrate the mind on the subject, while the assistant communicates to paper the thoughts which follow. Many of our greatest writers rarely touch the pen and paper themselves, unless when writing on private matters, but, stretched out in the mean time in an easy-chair, or upon a lounge, prepare their articles through their amanuenses.

Brain-workers should rest often, and never allow themselves to become weary by drawing upon the resources of the future. There is a false idea prevalent about resting enough in a few weeks in summer

to last the year. However full of delight and peace the lazy hours in the country, however freighted with rest and strength the long day by the sea, we cannot hoard and carry away enough of the precious store. Every twenty-four hours is a cycle of its own in which to tear down and build up, and whatever is spent between one sunrise and another must be made good from food, recreation, and rest. Whoever commences the morning already tired, and continues his labor, is spending too much vitality, and will find that a system of paying Nature's past debts by drawing on the future will eventually make him a bankrupt. To any one, unless shut up between brick walls, if there belongs a green spot somewhere around the house, if he can sit, at least, under one vine and fig tree of his own, there is at hand a perennial spring, if he but knows how to drink of it. Perhaps you will say, "I cannot stop to rest; I have no time; I will by and by, but I must do my work." Ah! but are you sure of your by and by? Are you not doing the very thing now that may lose it for you; or, if entered upon, will it not, instead of being spent in rest, as you fondly hope, be spent, rather, in regrets for the strength so unwisely and hopelessly lost.

ACTIVITY OF MIND NECESSARY TO HEALTH.

While some of our best minds may have been injured by overwork, it is to be regretted that the brain-power of so many of our people is lost in inactivity, or spent upon subjects of minor importance. The body can never become symmetrically developed without the co-operation of the mind.

If we would have our bodies healthy, we must

bring the whole system into harmony with the laws of our being. The brain, which is the organ of thought, and the whole heart and soul, must be enlisted in the object we desire to accomplish. The brain must be used, and used in orderly and vigorous ways, that the life-giving streams of force may flow into the expectant organs, which can minister but as they are ministered unto. We admire the vigorous animal life of the Greeks, and with justice we recognize, and partly seek to imitate, the various gymnastic and other means which they employed to secure it. But probably we should make a fatal error if we omitted from our calculation the hearty and generous earnestness with which the highest subjects of art, speculation, and politics were pursued by them. Surely, in their case, the beautiful and energetic mental life was expressed in the athletic and graceful frame. And is it a mere extravagance to ask whether much of the lassitude and weariness of life may not be due to lack of mental occupation on worthy subjects, exciting and repaying a generous enthusiasm, as well as to an over-exercise on lower ones? whether an engrossment on matters which have not substance enough to justify or satisfy the mental grasp, be not at the root of some part of the maladies which affect our mental convalescence? Any one who tries it soon finds out how wearying, how disproportionately exhausting, is an over-dose of "light literature," compared with an equal amount of time spent on real work. Of this we may be sure, that the due exercise of brain, of thought, is one of the essential elements of human life. The perfect health of a man is not the same as that of an ox or a horse. The preponderating capacity of man's nervous parts demands a corresponding life. And

this fact must be recognized and acted upon in the solution of the problem of health.

It has been supposed that hard study is very injurious, and it is believed by many that the health of young people is often broken down by mental effort. Parents may not understand why their sons and daughters attending our common schools, boarding-schools, academies, and colleges, who were expected to become educated and developed into perfect men and women, become weak in intellect and physically debilitated. This sad result is usually attributed to hard study; but this is often a mere subterfuge. It is true that *excessive* study, with the confinement consequent upon it, and insufficient exercise, may produce both mental and physical debility. But numerous and well-attested facts coming under our observation justify us in saying that the majority of these cases are dependent upon other causes.

Study strengthens the mind, as exercise does the body; and when parents and teachers see the glow of health fading from the cheek of those under their charge, they may well suspect that such persons are guilty of a solitary vice, which, if continued, will, in spite of all their education, destroy the vigor of both body and mind, and render them imbecile, and unfit to properly discharge the duties of life. (See Dr. Greene's "Medical Compendium.")

The most healthy exercise, that which most promotes physical vigor and strength, is the exercise of the human brain, which is itself a physical organ. The pale and puny student, who flatters his self-conceit that he is suffering dyspepsia, and all the ills that come with it, because he is so intellectual, may not lay the flattering unction to his soul; it is because he is sim-

ple and weak, having neglected his mental and physical training. With a sound system of physical exercise, and healthy modes of living, that same pale and self-fancying intellectual being would accomplish twice the mental work that has brought him to death's door, in which very pleasant position he prides himself.

It has been proved by statistics that among the longest livers, as a general rule, are the intellectual. A professor examined the subject, and found that, taking classes in the average, those that are dumbest and stupidest are, as a general rule, shorter lived than the good scholars, those who exercise the brains thoroughly, faithfully, and have performed all their duties conscientiously. And yet there is a great disproportion between the powers of childish attention and the length of school hours. Mr. Donaldson, head master of the Training College of Glasgow, states that the limits of voluntary and intelligent attention are, with children of from five to seven years of age, about fifteen minutes; from seven to ten years of age, about twenty minutes; from ten to twelve years of age, about fifty-five minutes; from twelve to sixteen or eighteen years of age, about sixty minutes; and continues, "I have repeatedly obtained a bright, voluntary attention, from each of these classes, for five, or ten, or fifteen minutes more; but I observed it was always at the expense of the succeeding lesson."

As soon as the capacity of the brain to receive instruction becomes exhausted, a recess of a few minutes should be granted, after which the mind will be in condition for another season of study. By attention to these rules, as much can be taught to children in three hours a day as they can by any possibility receive; and it is an axiom in education that no lesson has been

taught until it has been received ; as soon, therefore, as the receiving power of the children is exhausted, any further teaching, until they have had a season of rest, is useless, nay injurious, inasmuch as you thereby weaken, instead of strengthen, the receiving power. This ought to be a first principle in education ; but it is seldom acted on.

The truth of this is made evident by the testimony of all competent witnesses. We respectfully submit to all school commissioners, teachers, and parents who may read these statements, that they are not of a character to be glanced at and tossed aside, but are worthy of being thought of and acted upon.

From Carlyle's pictures of German schools, and from all description of the English schools, there is no doubt that in both those countries there is a lamentable want of understanding, on the part of scholars, of the subjects which they attempt to learn. The matter is still worse in France and Austria, and it is the prominent vice which pervades the whole American system of education.

Our failure to secure an understanding of the things which we try to teach is, doubtless, in part owing to the fact that we endeavor to teach too much in a given time ; but it is also in part attributable to the circumstance that we waste more than three fourths of the time trying to impart ideas when the mind of the pupil is not in a condition to receive them. A teacher might as well expend his efforts upon carved wooden images of children as upon scholars after their minds are tired out.

CHAPTER VIII.

VALUE OF SUNLIGHT.

THE proper use of sunlight, and its relations to human life and the well-being of society, have never been made the subject of intelligent and scientific thought.

Light is one of the most active agencies in enlivening and beautifying our homes and the material world around us. People do not sufficiently realize the value of sunlight as a health-giving agent to the physical system, or of its importance to our moral and spiritual natures. We absorb light, and it nourishes us with strange power. We are more active under its influence, can think better, and work more vigorously.

And yet the object of many mothers and nurses seems to be to devise means to keep the sunlight from their dwellings. All persons must know, if they do not realize, that shutting out the light of the sun is a direct violation of Nature's laws, for which the community pays dearly in sickness and loss of life. Care should be taken, both in health and sickness, to insure a large amount of direct sunlight, if possible, to all the inmates of every dwelling. Parents and nurses should remember that it is impossible to rear well-formed, strong, and robust children unless attention is paid to this requirement. Sunlight is particularly important in childhood and to persons of low vitality. In all diseases characterized by a deficiency of vital power,

the rays of the sun should be allowed to act directly upon the person every day. It may not be well to allow its rays to fall directly upon the head, but its vivifying effects upon the body and limbs, and also upon the mind, is wonderful, and should not be neglected. In convalescence from almost all diseases, the light of the sun acts as a most powerful and healthful stimulant, both to the mental and physical systems. It may often be necessary that sick persons should be kept quiet, and away from the noise and excitement of company; but we insist upon it that they should not be deprived of the smiling countenance of that old friend and nurse — the sun. The evil effects of keeping invalids in darkness and obscurity cannot be too carefully guarded against. The weakness and depression of spirits which are so often met with in convalescents kept in the dark, disappear like magic when the rays of the sun are allowed to enter the chambers. Wounds of every kind heal with greater rapidity when the diffused light of the solar rays is allowed to reach them. It has always been a subject of notice by physicians who interest themselves in the sanitary condition of society, that in hospitals, patients occupying the sunny side of the buildings recover much more rapidly than those in less favored rooms. In epidemics of all kinds, persons living upon the sunny side of streets, or in sunny localities, have escaped with comparatively little sickness, while the inhabitants of the shady side of streets and dark alleys have suffered a terrible penalty for a violation of this law of life. God has supplied sunlight sufficient for all the creatures of his hand; and so long as we refuse to accept of it, and insist upon building our habitations and cities in violation of this law, so long will we pay the penalty by ill health and premature death.

Plants cannot be perfected without the vivifying influence of sunlight. Rooms from which light and air are excluded will accumulate elements that engender disease and death. Dark rooms always bring depression of spirits, imparting a sense of confinement, of isolation, of powerlessness, which is chilling and deadening to the energy of both body and mind. It is a fearful mistake to curtain and blind windows so closely, for fear of injuring the furniture by exposure to the sun's rays.

Let us have light, and fresh air too, and prevent, if possible, suffering the penalty of aches and pains and long doctors' bills. Let us take the airiest, choicest, and sunniest rooms in the house for our living-rooms, — the workshop where brain and body are built up and renewed. Let us have as many windows as we can, through which the sunlight and pure air can freely enter. To us these windows mean much more than was ever intended or dreamed of by the architect. They are the poems of the house. They serve to bring out and develop the hidden power of the soul, and give scope and freedom to the eye and to the mind.

Let us have light, bright countenances, and cheerful hearts in all our homes; and if our carpets are a little faded, let us raise our eyes to the open windows, and take a view of the fields clothed in beauty, or the heavens radiant with glorious light.

Let us live in the light, and insist upon the light and life-giving influence of the sun in our dwellings, in our churches, and in all our places of resort.

It is still more important to us, as spiritual beings, that we receive into the "home we live in" light from the Sun of Righteousness. Let us open wide the

windows of our hearts, brush away the cobwebs of sin by the atonement of our Saviour, and live and walk in the light, that when we have finished our course in this world of light and shade, we may be accounted worthy of acceptance in that better world, where we hope to enjoy the *light* and the *substance*, without the *shade* and the *shadow*.

CHAPTER IX.

EXERCISE.

ONE of the great conditions of life and health is exercise, and without it the health is impaired, the system becomes enfeebled, and life itself shortened. A distinguished physician once said, "I know not which is the more necessary to the support of the human frame, food or motion." Food is the life-giving principle, but it requires a certain amount of exercise to enable the economy to convert it into suitable material for use, which can be assimilated by the system.

By proper exercise the chest is expanded, the tone of the muscles improved, the current of blood quickened, and the whole system invigorated and refreshed. But exercise, to be effective, must not be excessive; must never be carried so far that the body feels fatigued, or the muscular powers exhausted, in which case more harm than benefit is the result.

It is of the most service, also, when taken at regular intervals, not by fits and starts, too much one day and the next too little, but in moderate amount each day. As we gain most from that which is pleasurable, that which agreeably occupies the mind, the cultivation of a garden, or any light work, with a distinct end in view, is always preferable and more conducive to health than long, solitary walks, which, because

they are aimless, are often uninteresting and tiresome, and the body lacks the refreshing energy which the exercise should bring. It is absolutely necessary to keep harmony between mind and body, in order that exercise should be beneficial; and without this harmony it is not only without benefit, but in many cases is exceedingly injurious. The peculiar relations of the body and mind render it difficult to affect the body favorably in the cure of disease without a corresponding impression upon the mind. And to this fact may be attributed much of the ill-success of physicians; they treat the body and neglect the mind. Many affections are dependent alone on a diseased state of the mind. Remove this morbid condition, and the bodily affliction disappears as if by magic. So exercise, to have its health-giving effect, must have the co-operation of the mind. Physicians frequently recommend long walks as exercise. When the hour for taking it comes, their patients rise listlessly, yawn, stretch themselves, and say, "Well, I suppose I must take my walk, and have it done with." Taking it as a medicine, instead of making it a pleasure, they return tired, out of humor, and with exhausted vitality. This is all wrong. Every exercise for invalids in which the mind does not co-operate with the body is worse than useless, as it tends to exhaustion rather than building up.

In all such cases our first endeavor should be to get the body and mind in harmonious action, and then, when physical exercise is required, the patient should be instructed to have some purpose in his walks, such as calling upon some friend, or viewing some object of interest, so that his mind shall be taken from the walk, and he will return refreshed and invigorated.

Exercise may be active, such as walking, gardening, dancing, and the active sports ; or passive, as sailing, or riding. For the young, healthy, and vigorous, we would recommend the former, while for those who have become invalids from disease, and whose powers are greatly depressed, the latter would be preferable.

We cannot, in this work, expatiate upon the relative utility of the various manners of exercise ; suffice it to say, that any exercise which does not fatigue and debilitate the person, may be of benefit in promoting the general health.

Not only the body, but the brain, requires exercise. The brain, the great centre of life, requires the stimulus of vigorous thought. The same laws which govern other parts of the system are applicable here ; use strengthens, while without it the brain, and, indeed, the whole mental and moral character, becomes weakened ; and with that weakening, the integrity of the whole physical constitution is impaired. It is a prevailing mistake that active study impairs health and shortens life ; for it is only by close application, and a vigorous exercise of the powers of the mind, that a bright manhood or womanhood can be attained. Instead of debilitating, it strengthens ; instead of shortening life, it prolongs it, and opens the pathway to broader culture and a higher sphere of life. There are cases in which the young and ambitious strain their mental capacity and overwork the brain, thus bringing on disease and premature decay. But the cases are rare, and when they occur, it is not the exercise, but its abuse, that causes the injury.

POSTURE.

An erect bodily attitude is of vastly more importance to health than is generally imagined. Crooked bodily positions, maintained for any length of time, are always injurious, whether sitting, standing, or lying, whether sleeping or waking.

To sit with the body leaning forward on the stomach, or to one side, with the heels elevated to a level with the head, is not only in bad taste, but exceedingly detrimental to health. It cramps the stomach, presses the vital organs, interrupts the free motions of the chest, and enfeebles the functions of the abdominal and thoracic organs, and, in fact, unbalances the whole muscular system.

Many children become slightly humpbacked, or severely round-shouldered, by sleeping with the head raised on a high pillow. When any person finds it easier to sit, stand, or sleep in a crooked position than a straight one, he may be sure his muscular system is badly deranged, and the more careful he is to preserve a straight or an upright position, and get back to Nature again, the better.

Those persons engaged in occupations requiring the hands alone to move, while the lower limbs remain motionless, should bear in mind that without frequently raising the frame to an erect position, and giving exercise to all parts of the body, such a practice will tend to destroy their health. They should also sit in as erect a position as possible. With seamstresses, there is always more or less stooping of the head and shoulders, tending to retard circulation, respiration, and digestion, and produce curvature of the

spine. The head should be thrown back to give the lungs full play. Health cannot be maintained without free respiration. Strength and general health must come from exercise. Confined attitudes are in violation of correct theories of healthy physical developments and the instincts of nature. Those accustomed to sit writing for hours, day after day, can form some idea of the exhausting nature of the toilsome and poorly-paid labor of the seamstress.

Parents and guardians should see to it, that those under their care maintain an erect posture, and keep the system in harmony with the laws of life, especially during the period of growth. And persons who, from necessity, are obliged to remain for a time in unnatural or cramped positions, should overcome the evil, as far as possible, by proper exercise in the open air, and other means of maintaining the strength, vigor, harmony, and beauty of their physical constitutions.



THE BENEFIT OF LAUGHING.

There is not the remotest corner or little inlet of the minute blood vessels of the human body that does not feel some wavelet from the convulsion occasioned by good, hearty laughter. The life principle, or the central man, is shaken to its innermost depths, sending new tides of life and strength to the surface, and thus materially tending to insure good health to the persons who indulge therein. The blood moves more rapidly, and conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey when the man is laughing,

from what it does at other times. For this reason every good, hearty laugh in which a person indulges tends to lengthen his life, conveying, as it does, new and distinct stimulus to the vital forces. Doubtless the time will come when physicians, conceding more importance than they now do to the influence of the mind upon the vital forces of the body, will make their prescriptions more with reference to the mind, and less with drugs for the body; and will, in so doing, find the best and most effective method of producing the required effect upon the patient. Our advice to all is, indulge in good, hearty, soulful laughter when the opportunity offers, and you will derive material benefit therefrom.

A merry heart, a cheerful spirit, from which laughter wells up as naturally as bubbles the springs of Saratoga, are worth all the money-bags, stocks, and mortgages of Wall Street. The man who laughs is a doctor, with a diploma indorsed by the school of Nature; his face does more good in a sick-room than a pound of powders or a gallon of bitter draughts. If things go right, he laughs, because he is pleased; if they go wrong, he laughs, because it is cheaper and better than crying. People are always glad to see him; their hands instinctively go half way out to meet his grasp, while they turn involuntarily from the clammy touch of the dyspeptic, who speaks on the groaning key. He laughs you out of your faults, while you never dream of being offended with him; it seems as if sunshine came into the room with him, and you never know what a pleasant world you are living in until he points out the sunny streaks on its pathway. A good-humored laugh is the key to all hearts. "Satire," says a keen observer, "is the most useful of

all forms of writing; sentiment is literally wasted on nineteen readers out of twenty!" The truth is, that people like to be laughed at in a genial sort of way. If you are making yourself ridiculous, you want to be told of it in a pleasant manner, not sneered at. And it is astonishing how frankly the laughing population can talk, without treading on the sensitive toes of their neighbors! Why will people put on long faces, when it is so much easier and more comfortable to laugh? Tears come to us unsought and unbidden. The wisest art in life is to cultivate smiles; to find the flowers where others shrink away for fear of thorns.

A good man is almost always a cheerful one. It is fit that a bad man should scowl and look melancholy; but he who has God's smile of approbation upon him should show its radiance in his countenance. Dr. Johnson said he "never knew a villain in his life that was not, on the whole, an unhappy dog." And well he may be. But an honest man,—the man with a good conscience,—let him enjoy his sleep, and his dinner, and the love of his wife, and the prattle of his children, and show a beaming face to his neighbor. Surely it is not the best theology that teaches that he who has given such fulness of joy to beasts and birds, delights in the misery of men, or that, having filled our hearts with gladness, we ought to give the lie to His goodness by wearing faces beclouded with woe, and furrowed with unhappiness.

CRYING.

There are times of sadness and sorrow when it is more natural to give vent to the feelings by crying rather than laughing.

A French physician has written a long dissertation on the advantages of groaning and crying in general, and especially during surgical operations. He contends that groaning and crying are the two grand operations by which Nature allays anguish ; that those patients who give way to their natural feelings more speedily recover from accidents and operations than those who suppose it unworthy a man to betray such symptoms of cowardice as either to groan or cry. He tells of a man who reduced his pulse from one hundred and twenty-eight to sixty, in the course of two hours, by giving full vent to his emotions. If people are at all unhappy about anything, let them go into their rooms and comfort themselves with a hearty cry, and they will feel a hundred per cent. better afterwards.

In accordance with the above, the crying of children should not be too greatly discouraged. If it is systematically repressed, the result may be St. Vitus's dance, epileptic fits, or some other disease of the nervous system. What is natural is nearly always useful ; and nothing can be more natural than the crying of children, when anything occurs to give them either physical or mental pain.

Probably most persons have experienced the effect of tears in relieving great sorrow. It is even curious how the feelings are allayed by their free indulgence in groans and sighs. Then let parents and friends

show more indulgence to noisy bursts of grief, on the part of children as well as of older persons, and regard the eyes and the mouth as the safety valves through which Nature discharges her surplus steam.



CULTIVATION OF FLOWERS.

One of the most pleasing, as well as beneficial, occupations is the cultivation of flowers. It may be particularly recommended to ladies, for there can be no more beautiful sight than a glowing-cheeked young lady, rake in hand, surrounded by the fragrant flowers her own hand has cultivated.

Physically there can be nothing better for daughters, and, indeed, for many wives, than to take sole charge of a small flower garden. The benefits derived from stirring the soil and inhaling the pure air, are freshness and glow of cheek and brightness of eye, cheerfulness of temper, vigor of mind, and purity of heart. Consequently she must be more cheerful and lovely as a daughter, more dignified and womanly as a sister, and more attractive and confiding as a wife.

How much better it would be for us all if we would enter into the spirit of the joyous summer season, if we could have the care of flowers irradiate our hours of toil and care! The person who can find pleasant companionship in the green fields and in the care and cultivation of flowers, will brace both the physical and moral nature against the trials and temptations of the world. "God never meant," says Howitt, "that all the loveliness of May should be left to the bird upon the bough and the beast in the field, and

that man, the noblest of his creatures, should be imprisoned in the workshop, and have none of it."

Who can disagree with this true lover of Nature, remembering how the influence of great cities tends to close the heart and life against the refining and ennobling influence of the summer sunshine, and to keep the people from healthful exercise in the open air?

The care and attention required to rear and train growing plants, occupy the mind to the exclusion oftentimes of senseless novel-reading and other frivolities. You listless, pale-faced, fragile girl, throw off your mock delicacy, put on gloves, if you will, but work in the flower-garden till your cheeks vie in color with the blush of the rose you cultivate.

We have for several years, at our "Highland Home," appropriated to our "better half" and each of our daughters a small piece of ground, of which they take the entire charge, for the cultivation of plants and flowers. They are by this means enabled to surprise their friends with the vigor of their healths and the variety and beauty of their flowers. The exercise of cultivating these flowers not only serves to keep them in good health, but affords them no small amount of pleasure in being able to gladden the hearts of friends and the sick, by presenting them bouquets of flowers from their own little gardens, and cultivated by their own hands.

We recommend this course to all our readers who have the least taste for flowers, or a foot of land for their cultivation; and those who have not space, to get a dozen flower-pots filled with choice plants, set them in conspicuous places, and they will add very much to the beauty of your home.

It is a common belief that plants in a sleeping-room

are injurious to health ; that they exhale gases which affect the lungs unfavorably, and in time produce disease and death. Now, though in theory this may appear to some to be true, we believe it is not true in practical experience. We are unable to find well-authenticated instances in which such results have taken place. On the contrary, we find in many instances, in which plants are placed in sleeping-rooms, that no harm results, unless it be from neglecting to remove the dead leaves and other decaying portions. More than this, in conservatories, where thousands of plants are growing, blossoming, and maturing their seeds, florists remain day after day, and many times spend their nights in the glass houses, sleeping in the midst of the plants ; and they are among the healthiest people of the land. We do not mean to be understood that poisonous plants are healthy, or that it is proper to cultivate in the house those whose blossoms have a strong, fragrant odor, such as lilacs or garden lilies ; but a well-aired room will never be made unwholesome by the presence of the delicately-scented roses, mignonettes, or violets.

The harmony of the universe is not interrupted in relation to this cultivation of plants ; and when Adam was commanded to till the soil, the growth of vegetation contributed to his health and well-being, instead of to his injury ; for tilling the soil and growing plants are among the most healthful occupations of man. We do not hesitate, then, to recommend the growing of flowers, not only in the garden, but in the house, and be assured that if injury accrue, it is from the dead leaves and decaying vegetation which is allowed to accumulate, and not from any deleterious influence of the plants themselves, or their cultivation.

OCCUPATION.

Choosing an occupation is one of the most important objects in life, and one should always be selected in harmony with our tastes and physical, mental, and moral nature — such an occupation as we can pursue with zeal, feeling that we are doing good to ourselves and those with whom we associate.

A good, stout bodily machine being provided, we must be actively occupied, or there can be little health or happiness. If a good, useful occupation be not provided, it is so ungenial to the human mind to do nothing, that men occupy themselves perilously, as with gaming, or frivolously, as with walking up and down a street at a watering-place, and looking at the passers-by. It is impossible to support, for any length of time, a state of perfect idleness. If idleness does not produce vice and malevolence, it produces melancholy. A merchant, mechanic, or farmer has no leisure for imaginary wretchedness; his mind is usually hurried away by the necessity of noticing external objects, and is guaranteed from that curse of idleness, the external disposition to think of himself. If we have no necessary occupation, it becomes extremely difficult to make to ourselves occupations as entirely absorbing as those which necessity imposes. The profession which a man makes for himself is seldom more than a half profession, and often leaves the mind in a state of vacancy and inoccupation. We must rise to a due sense of its great importance; and as the dispensing power is in our hands, we must be very jealous of remission and of idleness. It may seem absurd that a gentleman, who does not live by the profits of

farming, should rise at six o'clock in the morning to look at his farm. He is the happier for his eagerness ; his mind is more fully employed, and he is much more effectually guaranteed from all the miseries of indolence.

Let every man be occupied, and occupied in the highest employment of which his nature is capable, and die with the consciousness that he has done his best.

What a glorious thing it is for the human heart ! Those who work hard seldom yield to fancied or real sorrow. When grief sits down, folds its hands, and mournfully feeds upon its own tears, weaving the dim shadows, that a little exertion might sweep away, into a funeral pall, the strong spirit is shorn of its might, and sorrow becomes our master. When troubles flow upon you, dark and heavy, and you cannot overcome them by direct effort, you should seek by occupation to divert the dark waters, that threaten to overwhelm you, into a thousand channels, which the duties of life always present. Before you dream of it, those waters will fertilize the present, and give birth to fresh flowers that will become pure and holy in the sunshine which penetrates to the path of duty in spite of every obstacle.

Grief, after all, is but a selfish feeling ; and that man is the most selfish who yields himself to indulgence of any passion which brings no joy to his fellow-men.

CHAPTER X.

DRESS.

THE true explanation of the prevailing extravagance in costume is, that people, and especially women, dress for one another. In other words, they dress for their neighbors, — for eyes that can appreciate the material, and estimate the cost, of every separate article. That there is very little true love of art in dress is proven by the fact that, however beautiful and graceful any style may be, it is soon remorselessly swept away by the rage for fashion, which is ever demanding something new. Nor is the legitimate purpose of dress fulfilled. Women look not to the maintenance of the temperature of the body and the preservation of health, but dress in a gaudy style, endeavoring to out-dress each other, and thereby fall into pernicious habits of dress, which entail not only temporary uneasiness and suffering, but injure their health, and in many cases hurry them prematurely to the grave.

The thin covering for the upper portion of the spine and vital organs in cold weather; the accumulation of clothing on the middle portion; the pressure of tight dresses around the waist; and the weight, as well as heat, of the great mass of clothing resting on the hips, all combine to produce injuries to health which the devotees of fashion do not seem to realize.

Ladies whose circumstances in life require them to labor, and superintend their own households, find little time for dress. But as they deem it absolutely necessary to imitate the style of their more fortunate neighbors, they must accomplish it, although at the sacrifice of their health and comfort.

With men the style changes but little, remaining essentially the same from year to year; and clothing may always be obtained at a moderate expense. We remember the time when the expense of dressing a lady was much less than that of dressing a gentleman; and while the cost of a gentleman's suit has not increased to any great extent, that of a lady has increased more than fourfold, and has become a severe burden to many of our respectable families. We would advise, then, that ladies procure some fashion which is easy to be worn, beautiful to the eye, and which will not in any way distort the "form divine," and having perfected such a style of dress, wear it in spite of all the freaks that the fickle goddess of fashion may dictate, and they will soon emancipate themselves from some of the sorest trials of life, save their health, and improve their physical and moral condition; and the benefit will be realized, in future generations, in the elevation of the race.

Many women of the present generation are feeble, and glory in what should be their shame, and are often as proud of their weakness as Hercules and Samson were of their great strength. One of the greatest agencies in bringing about this weakness is the system of dress. The pressure and weight of the clothing about the waist render them liable to many distressing maladies; and the constriction and pressure of corsets upon the chest not only cramp and injure the vital

organs and distort the form, but by becoming the main support, the muscles of the back, which give that subtle grace of movement, are weakened from non-use, and in many cases are absorbed and shrivelled down to mere rudiments, so that if the corsets are removed, in many cases the person can hardly support herself in an upright position.

The system of dress is radically defective, even in childhood. A stout, strong man goes out on a cold day, with gloves and overcoat, woollen stockings, and thick, double-soled boots, and rubbers over, leading a child of tender years, an infant in flesh and blood, and bone and constitution, with soles as thin as paper, cotton socks, uncovered knees, arms naked, neck bare, — an exposure which would disable the nurse, kill the mother outright in a fortnight, and make the father an invalid for weeks. And why? To harden her to a mode of dress which she never is expected to practise, to accustom her to exposure which a dozen years later would be considered downright foolery.

The clothing we wear should be to protect the body, to maintain the proper temperature, and thus preserve the health. The object of clothing is not to impart heat to the body, but to prevent its loss; and in so far as the article worn is a bad conductor of heat, will the body be kept warm. Thus woollen is warmest, because it allows very little radiation of heat; while linen and cotton, being good conductors, allow it to pass off, and are therefore cool.

Articles used for garments should be porous also, not only to permit the free passage of the insensible perspiration, but to admit the absorption of oxygen and the exhalation of carbonic acid gas. The color also has much to do with the efficacy of clothing in

preserving heat. Dark garments readily absorb heat, while white ones reflect it. This may be shown by placing two pieces of cloth, one white, the other black, upon the snow. In a few minutes the snow beneath the black piece will have melted considerably, while that beneath the white remains unchanged. But dark clothing should not be worn constantly, as, while it absorbs the heat, it does not absorb, to a sufficient extent, the light of the sun; and as light is essential to our health, it is better to dress in light colors, at least a portion of the time.

In our New England climate, fickle in its gleams of sunshine and its balmy airs, the influence of dress is of the utmost importance, especially to those whose vitality is low, and who are predisposed to constitutional diseases. Pasteboard soles, low-neck dresses, and lilliputian hats, sow annually the seeds of a fatal harvest. Consumption alone bears away every year the ornaments of many social circles. The fairest and loveliest are its favorite victims. If young ladies could be induced to protect their persons with proper clothing, and regard the laws of health, many precious lives might be saved. An ounce of preventive in this fatal disease is worth many pounds of cure; for when once seated, it often defies alike medical skill and careful nursing.

We should never allow ourselves to forget that Nature intended us for warm-blooded animals. In this climate of surprising changes we are apt to forget it, especially in the fall and spring. At such seasons, when we freeze and simmer on alternate days, there is engendered in us a certain recklessness, which takes no heed of cold or heat, dampness or dryness, and receives all temperatures with the same dress, gener-

ally a defenceless one. It is certainly very troublesome to change clothing as often as the weather, and there is a prejudice in American minds against such change, which has a great deal to do with the rapidly-increasing population of our graveyards. People like to have some stability of purpose; and if they can have it in nothing else, they will try to have it in their dress. They will not make a change until they make a permanent one for the season. No matter how hot it is in the spring, they will wear spring clothes until summer; and no matter how cool it may be in August, summer clothes must be worn until fall shall actually set in. The chills thus produced are a fruitful source of disease.

We suppose that there are no people in the world so indifferent to the demands of the weather as Americans; and one reason of this is that very many of us are ashamed to keep warm. To wrap up and button up, and to put down windows whenever there is a chilling change in the air, argues, to most minds, a namby-pamby eagerness to be well, that is repugnant to the hardy American soul. So, rather than be laughed at, we shiver. We prefer tragedy to comedy, the serious to the ridiculous.

Our advice is, wear flannels, thin ones in summer, thick ones in winter. Nothing better can be worn next the skin than a loose woollen garment; loose, that it may have room to move on the skin, thus causing a titillation which keeps the pores of the skin open and the blood at the surface, and tends to prevent taking cold. Cotton wool merely absorbs the moisture from the surface, while woollen flannel conveys it from the skin and deposits it on the outside, from which the ordinary cotton garment absorbs it,

and by its nearer exposure to the air it is soon dried without injury to the body. Having these properties, wool flannel is worn by sailors, even in the midsummer of the hottest countries. The principle was well understood by the Indian, who, when he obtained a flannel blanket, remarked that "if it was ever so wet and cold, it was always warm and dry."

One of the most fruitful causes of disease is insufficient clothing upon the extremities, especially during the damp and cold season. The head and throat are, perhaps, the parts most liable to suffer; but the general health is always more or less affected. The legs and feet are far from the central part of the body; they are not in great mass, like the trunk, but extended, and enveloped by the atmosphere. Besides, they are nearer the damp, cold earth. For these and other reasons they require extra covering. If we would secure the highest physiological condition, we must give our extremities more dress than the body. It is a fault with many ladies that they do not have sufficiently warm clothing upon their limbs; and as a result they are troubled with headache, palpitation of the heart, irregularities, congestion of the liver, &c. The reason is that there is a want of blood in the extremities, and congestion of the internal organs is the result. To remedy this evil, drawers should be worn of sufficient warmth to protect the limbs, that the equilibrium of the circulation and general health may be maintained. By thus applying the warmth of the clothing directly to the limbs, the necessity of being burdened by extra-heavy skirts is obviated.

The feet also should be kept warm and dry by thick woollen stockings, and boots of such material and of such thickness as to keep out all dampness, and in

severe weather arctics, if necessary. To wear rubbers in cold, dry weather, to keep the feet warm, is an injurious practice. Rubber shoes are very comfortable and necessary for covering the feet during the wet and sloppy weather, but should never be worn on any other occasion; their sole use should be to keep out the water. They should therefore be put off whenever the wearer enters the house, and be worn as little as possible, because they are air-tight, and restrain the perspiration of the feet. The air cannot be excluded from the feet, or any portion of the body, for any length of time, without sensibly affecting the health. No habit tends more to good health than clean feet and clean, dry stockings, so as to allow the free perspiration of the nether extremities.

CHAPTER XI.

HUMAN LIFE.

It is interesting, as well as profitable, to study the different phases in which human life is manifested, and learn lessons of wisdom from its successes, its blunders, and its failures. Human nature is a great study. The endless variety of feelings and dispositions, and the different ways of showing them, together with their results upon individuals, families, and communities, are subjects fraught with deep interest, and deserve the attention and consideration of those interested in the health and welfare of the people.

“Life is as we take it, and the world is what we make it.” How necessary, then, that life should be viewed from that standpoint which will be of the greatest advantage to the individual and the community. Healthy human life is, to a great extent, dependent upon normal mental action and right emotions and dispositions. A happy life presupposes a sound body, and the predominance of qualities and dispositions in harmony with the laws of our being.

A CLEAR CONSCIENCE is a prerequisite to a happy and contented life.

How bravely a man can walk the earth, bear the heaviest burdens, perform the severest duties, and look all men square in the face, if he only keeps with-

in his breast a clear and enlightened conscience — a conscience void of offence to God and man. There is no spring, no power of inspiration like this. To feel that we have omitted no just task, and left no obligation unfulfilled, fills the heart with satisfaction, and the soul with strength. Conscience, it has been said, makes cowards of us all; but this is only true when it reproaches us with some unmanliness; some shrinking from truth and right, or the commission of some wrong. There is no power that can inspire so much confidence, or give such strength to the human mind, as a consciousness that we are doing our duty; feeling this in our souls, though the opinions of the mass of mankind, or even of our best friends, are against us, we shall not be deterred from performing our duty. No power can crush out this feeling. It is like Milton's angels, "vital in every part."

This royal road to right is not an intricate one, nor are the demands of a clear conscience dubious. Impossibilities are not asked of man, and the errors of ignorance, if not wilful and persisted in against the means of knowledge, are to be pardoned, being only the thorns and pebbles in the path over which man is to run his race towards perfection. We all know instinctively what we would have our fellow-men do unto us, and the "golden rule" by which the conscience is kept clear, only asks that we should do the same in return.

A HAPPY DISPOSITION is necessary to a happy life. There are many people who seem to think that their lot in life is one of peculiar hardship, and in the fullness of their repining hearts wonder how it is that they bear their burdens, and manage to keep up under them.

Full of complaints, they weary their friends with the details. Each morning finds them groaning under real or imaginary evils, and their last thoughts ere they go to sleep centre upon their afflictions and ill-luck.

This state of feeling is dependent upon some hereditary predisposition, or some disease of the nervous system, and indulged in for a time, becomes chronic, and then there appear no silver linings to the clouds. Persons thus affected envy others what seems to them continual prosperity and happiness, and wonder why it is they are not likewise favored, forgetting entirely the fact that they only see the best side, as their neighbors have sense enough to enjoy what of life they can, receiving its ills with a becoming spirit, and not allowing themselves to be overcome by them. They live above their misfortunes and minor troubles, and in so doing have gained very decided advantages. We all find quite early in our career that life is not all sunshine. Clouds will arise, and the best person on earth is not exempt from cares, troubles, privations, and disappointments. Those so afflicted should seek to reform their own hearts. Every victory gained over self, every evil propensity conquered, strengthens the spiritual nature, and renders the victor better able to fight life's battle successfully. Broader views and happier inspirations fill the soul, and they begin to realize that this world is more beautiful than they had supposed, and if they live up to the comforting assurance that this life is merely the probationary state wherein they are to prepare for the better one to come, it will take the sting out of real troubles, give strength and courage under the most trying circumstances, aid in the pathway of duty, and render them

of real service in solving the problem of health and promoting human happiness.

This fault-finding, complaining, snappish disposition is wicked, producing baneful effects upon its possessors, and those with whom they associate. There is good in the world, overbalancing the evil; there is pleasure exceeding the pain. Love abounds. Truth is as true and beautiful to-day as ever. Virtue is as lovely, and as certain to bring its welcome reward. It is right that we should enjoy as much of this life as we can. Faith and trust in the divine Being never were designed to make our pleasure less, but to open new and higher sources of enjoyment. When happiness flows in upon you and yours, give it a warm reception, obtain all the good you can while it tarries. Treasure up all its blessings, and let its sunshine permeate your entire being. When sorrows come, as come they will, heed the lessons which they teach. If they are the results of evil doing on your part, or of omission to perform your duty, let them prove a warning. If they are beyond your ken, then study well the meaning, and let the lesson soften your heart and make you receptive to good influences—make your life better, your aspirations purer and holier, drawing you nearer and nearer to the better land which you hope to reach after this world, with its hopes, its fears, its joys, and its sorrows are closed upon your earthly senses forever. Although life is so uncertain, and death so sure, men seldom think of the great event until the shadows fall across their own path, hiding forever from their eyes the traces of loved ones whose smiles were the sunlight of their existence. Death is the great antagonist of life, and the cold thought of the tomb is said to be the skeleton of all

feasts. We shrink from the dark valley, although its passage may lead to Paradise ; and with Charles Lamb, we do not want to lie down in the muddy grave, even with kings and princes for our bed-fellows. But the fiat of Nature is inexorable. There is no appeal from the great law which dooms us to dust. We flourish and we fade as the leaves of the forest, and the flower that blooms and withers in a day has not a frailer hold upon life than the mightiest monarch that ever shook the earth with his footsteps. Generations of men appear and vanish as the grass, and the countless multitude which fills the world to-day, will to-morrow disappear as footprints on the shore.



HAPPINESS NECESSARY TO HEALTH.

The great end and aim of mankind is happiness, and the means of acquiring this end constitute much of the strife, contention, and bustle of life. Happiness is, to a great extent, dependent upon physical health, and the harmony of its action with the intellectual and spiritual part of our nature. The great object of most men seems to be the acquisition of sufficient wealth to “make them comfortable ;” and yet a moment’s reflection ought to convince any one that money cannot purchase either comfort or happiness, — only the means of it. Happiness does not depend upon wealth or position. A man may be miserable surrounded by wealth, or he may be happy without a dollar ; but to be so, he must have the right feelings and the right disposition, with a mind and heart in the right place, for upon these conditions depends the

real happiness of every person. A man who is good-natured, cheerful, and happy in a state of poverty, would exhibit the same qualities in a palace or on a throne; and a person who is overbearing, wretched, and miserable in poverty, would be equally so surrounded with wealth. We often meet with persons, both men and women, who are cross, ill-natured, and dissatisfied, finding fault with everybody and everything, whose first greeting is a complaint, and whose conversation seldom fails to end in an enumeration of difficulties, hardships, wrongs, and quarrels. Such persons always look upon the dark side; and holding the shadows of imaginary ghosts between themselves and the sunshine of life, they are necessarily gloomy and unhappy. A person who will fret and scold, and exhibit all the evidences of ill temper in the cottage, would do so as master or mistress of a palace. We are not rich or happy according to what we *have*, but according to what we *are*; and whatever a man is to-day, with a single dollar, he will be to-morrow with millions, unless his heart and affections are changed. It is fair, then, to presume that people who cannot make themselves comfortable in any particular set of ordinary circumstances, would not be so under others; and such persons, expecting to obtain happiness in any other way than by changing their own dispositions, will waste their lives in fruitless efforts, and multiply the griefs they wish to remove. Men or women who have the canker of discontent eating out the better feelings and affections of the heart, will carry misery with them wherever they go; and so long as they harbor in their minds the spirit of envy, habitual discontent, or unbridled ill nature, the evil consequences will follow them, and increase as the

habit becomes more fixed, and must necessarily, by reacting upon the physical system, be productive of ill health, destroying their happiness, and sullyng the brightness of their lives.

The results of such feelings are not confined to the person exhibiting them, but are as contagious as the smallpox, and much more fatal to the peace and well-being of society. Such persons do not begin to know how much mischief they are doing in the community; and they will never perhaps be made to realize that by the exercise of such passions, their minds become more and more lost to a sense of kindly feeling. Whatever of an unendurable disposition such persons may have to-day, they will be likely to have to-morrow to an aggravated extent; the miser will become more miserly; the drunkard more drunken; and the fretful and complaining more unhappy.

If any of our readers are not comfortable and happy now, under the circumstances which surround them, and wish to become more comfortable and happy, the first step should be to seek a change in their own minds and dispositions, and get their hearts and affections right, and when this is accomplished, if wealth does not follow, they will be prepared to be happy without it.

Much of the sadness and gloom which hover about the mind is caused by physical disease.

The medical profession have endeavored to remove such difficulties, and promote the physical health of their patients, but have done little to instruct the people in the laws of life and that harmony of nature which is necessary to secure that permanent health and happiness which it should be our privilege, as a people, to enjoy.

Bodily health and mental comfort react most powerfully on each other; for while the mind is dwelling in a body racked with pain, it can hardly be expected to triumph completely over the sufferings of the body. The mind, however, should always maintain its supremacy over the physical constitution; and ill health should never be made an excuse for the exhibition of ill feelings. History affords us numerous instances of a calm and happy resignation of mind under the greatest bodily suffering.

That there is an intimate relation between the moral and physical nature of man, so that what oppresses the one will painfully and injuriously affect the other, and what has a favorable or profitable effect on the one will have a similar effect on the other, is a fact admitted by all who have given the matter consideration. A mutual sympathy exists between the two natures. Intense fear, or anger, or grief has been known to take away life in a few moments; and it has been proved that these passions, in a less degree, have retarded digestion, taken away appetite, and brought on sickness. A fretful, malicious, or discontented man cannot expect to have as perfect health as he would have if love and cheerfulness shed their bright beams in his heart, on his face, and on all around him. Who does not know the sustaining and restoring power of hope? When the last remedy has failed, and by some particular circumstance hope has returned to the despairing bosom, it has reanimated the whole system, and reclaimed the patient from the verge of the tomb to the glow and vigor of health. Illustrations of this are abundant.

Further, the influence of the religious state upon the health is greater than is often supposed. So long

as one is distressed about his relation to his God, conscious of his anger, and distrustful of his favor and mercy, or suffers remorse for his moral turpitude, or loathes himself, his health will suffer. All this religious anxiety and distress make large draughts upon the nervous energy. His vitality and strength are greatly depreciated, and the animus which is essential to the continuation of the work of the physical functions with their proper intensity is taken away. On the other hand, it is equally true that ill health is very unfavorable to moral development. It tends to make men peevish, harsh, and uncharitable. Besides giving a positive bent to character, it often casts a dark shadow over one's religious feelings.

A sincere Christian, with a weak stomach, or a redundancy of bile, or an oppressed, overworked, feverish brain, may consider himself so sinful as to be beyond the reach of infinite mercy; may doubt God's grace; in fact, may distrust everybody whom he has the greatest reason to trust; may think everything going wrong with himself and with everybody else. At other times, when the physical functions act normally, the mind will be transported with God's grace and love, the heart will overflow with peace and gratitude, and he will feel "strong in the Lord;" whereas before he felt he could do no good in the world.

In ill health one thinks that he is the most miserable of all men (perhaps this is not far from the truth), and that no one has so many misfortunes as he. It seems to him that the world is cold, and that no one cares whether he lives or dies. There is no beauty in Nature. The earth is of iron, and the heavens are of brass. Everything is against him, and he might better have never been born. But when the blood

has resumed its healthy flow, and lost order and normal activity have been restored to his "earthly tabernacle," everything moves on harmoniously, and he wonders how any one can be unhappy in such a beautiful world. All his bugbears have vanished. His fears have gone to the winds. He is brimful of hope. Every one he meets greets him with a smile.

A remarkable case of religious gloom, very probably occasioned by ill health, is that of the unhappy, yet pious Cowper. He was possessed of a religious despair which, towards the end of his life, never left him. It was painful to witness; but whether it was the cause or the result of his ill health may be a question. Probably his moral and physical distresses mutually aggravated each other; but it appears that his physical derangement, or disease, was the great agent of all his misery, and that this, in the first place, was a great cause of his despondency.

We meet with illustrations of these truths daily. If this is so, how careful we should be to preserve, or regain, health by rational means, that we may not only feel well, but that we may thereby favor our moral development, and thus further our highest happiness; and, on the other hand, to improve our characters and live virtuously, that we may thereby promote our health and bodily comfort.

Thus we appeal to the dispositions of two classes of people: to those who are inclined to be immoral or vicious, but prize their health, we say, Live godly, that you may have good health; for "godliness hath promise of the life that now is." To those who are careless of the laws of health, but foster the hope of being Christians, and living accordingly, we say, Live hygienically, that you may promote your godliness.

There is danger on the one hand of ignoring physiological causes and agencies, and on the other of ignoring or slighting moral causes or operations. Both should be acknowledged, not abstractly, but in the most intimate connection with each other. The same God formed both natures; and there should be, and is, no schism in this grand structure of humanity.



OLD AGE.

Physiologists, from the date of Galen, have established rules and regulations for the preservation of life, which are all included in the natural laws. Longevity depends upon a strict observance of these laws, and upon such natural conditions as the parentage, constitution, and form of the individual. Dr. Allen, of Lowell, affirms that one condition, or prerequisite of longevity, is inheritance; it comes down in families, for generations, as inherited qualities; and very seldom, if ever, does any one reach a very advanced age, unless it was found to some extent in his immediate ancestors. This condition accords with the law of longevity, as based upon perfectionism of structure and harmony of function.

The doctor cites, in proof of this, cases of longevity in his own family. Jonathan Allen had seven children, one dying in infancy, but the other six reached the average age of eighty. The parents reached the ages of ninety-two and eighty-seven: Nehemiah Allen had ten children, — four sons and six daughters, — who reached, respectively, these remarkable ages: sixty-seven, eighty, eighty, eighty-two, eighty-four,

ninety-three, ninety-four, ninety-five, ninety-six, ninety-six. If the months in each case are added to the aggregate, it makes an average for the whole of eighty-eight years. We question whether many such cases of family longevity can be found in the whole history of New England.

The celebrated Hufeland describes the most favorable organization for old age as one of the middle size, with a complete harmony of all the parts, senses not too delicate, pulse slow and regular. With respect to the sex, there has been much discussion; but it is certain that women do attain as great age as men, notwithstanding their more delicate form.

The health of the human race is to a great extent dependent upon the external conditions of life, especially the character of location or habitation; and a country geographically situated so as to combine regularity of the seasons with a uniform and mild climate, is the most conducive to the prolongation of life. The most unfavorable localities are those where extremes of temperature prevail. In Iceland and Siberia, both with extremely cold climates, seventy is the standard of extreme age, while in China, with its enormous population, centenarians are so rare that when the emperor, in 1784, assembled the oldest inhabitants of the empire, to the number of three thousand, there were only four whose ages exceeded a century.

Mountainous regions, on account of the purity of the atmosphere, offer superior advantages to those of low countries. In proof of this fact we might mention numerous instances of longevity among those dwelling on the Green Mountains; and we may be pardoned an allusion to our own family, in copying the following obituary notice from the Boston Traveller:—

“Died, in Whittingham, Vermont, July 19, 1873, Alfred Greene, aged eighty-nine years and eight months. He was one of the first born in the place, and was at the time of his death the oldest man in the town. His father was one of the early pioneers, having removed from Massachusetts, and settled in that state when it was an unbroken wilderness; when the howling of the wolf was heard about his humble dwelling, and the red man was frequently seen about the Sadowga Pond, which still retains its Indian name, and upon whose southern border lies the old homestead where the deceased was born, and upon a portion of which he lived and died. He was a man of great energy, and uncommon strength and power of endurance; and his ambition never forsook him. He was active and interested in the care of his farm to the last. The day before he was taken sick he walked five or six miles in the morning to transact business, and worked most of the day in the hay-field, with almost the energy and vigor of youth. He was sick but ten days, and died in the full triumph of faith in that Saviour who had sustained him through his long life of usefulness. He was the father of Dr. Reuben Greene, who has been a prominent physician in this city for more than twenty-five years.”

He was descended from a line of ancestors, most of whom lived to a ripe old age, few of them dying under the age of seventy-five.

Old age is natural; death that comes without it is unnatural, even though it be a death by disease, and not by violence. It has been said that every man ought to live to be old. A purely natural death presupposes a long life preceding it, with a gradual decay of the faculties, mental and corporeal. If this posi-

tion be correct, it must be admitted that comparatively few of the human family die a natural death. Many perish by accident or by pestilence; many die early, because they inherit feeble constitutions; some because they are totally ignorant, or utterly careless, of the laws of bodily health; others by indulgence in dissipation or vice.

Old age is the natural culmination of a healthy life; and in the order of Nature there must be a time for maturity and a time for decay. The time comes when the hand will tremble, the step falter, and the eye grow dim. The mind, sympathizing with the body, gives evidence of failing strength; the memory becomes less tenacious, the attention less fixed, and the processes of reasoning more difficult.

All the parts of the human machine wear out equally, one not faster than another; one no sooner than another; all gradually cease; all fail at the same instant; one worn-out function does not cease its operation while another, in its full vigor, strives to go on without it; hence the universally observed fact that the very old die gently, without a struggle, and scarce a pang; "like as a shock of corn cometh in his season."

" So fades a summer cloud away;
So sinks the gale when storms are o'er;
So gently shuts the eye of day;
So dies a wave along the shore."

Connected with the feebleness of old age is a consciousness of inability to do as formerly, and a consciousness, also, of the fact that this inability will never diminish. The hardest day's work has been done; the mightiest efforts of life have been made; the highest point has been reached and passed, and

now every step is a downward one, and the other side of the hill can no longer be seen, save in memory's vision. No wonder that there should be in the minds of the aged a disposition to refer to the past; to indulge in reminiscences of former days, which can scarcely be appreciated by the young. And yet, how pleasant thus to see old persons lively, cheerful, hopeful! Such people never grow old! When benevolence and virtue dwell in the heart, they are as cheerful in age as when the spring of life opened to view. When we look at good people we never think of their age; they look charming as when the rose of youth first bloomed on their cheeks. The roses of love and goodness have not faded; they will never fade. In their neighborhood such people are friends and benefactors. Who does not respect and love old people who have passed their days in acts of kindness and mercy? Such persons can never grow old. Their heads may be gray, their limbs feeble, and the years of life many, but their hearts are always young.

There are, of course, disadvantages connected with old age. Among these is bodily suffering from infirmity, necessitating a dependence upon others, which, of itself, is afflicting to a sensitive nature. But what an honor to a family to have within its sacred domain the aged sire and mother who, though they cannot labor as formerly, can still lighten the toil of the household by their presence and their prayers! Their very infirmities become a means of grace to the younger members of the family, teaching them forbearance and patience, and offering them an opportunity of relieving the wants of those who, in their earlier days, suffered sacrifice to obtain some of the very comforts which the younger generations enjoy; and it should be re-

garded as a pleasure, as well as a duty, to share with them, now that they are infirm and disabled.

Old people may suffer from feelings of loneliness. They may be surrounded by friends, but they are not the friends of their youth. One by one these have passed away, as the years have rolled on, until they are all gone. Those with whom they started on life's journey are passed away, and they come down to us from a former generation.

Yet there are advantages in old age, despite the necessary ills which accompany it. There is an opportunity of reflection, unmolested by constant toil; there is the pleasure of seeing others work for the world's welfare as they formerly worked; the privilege of still assisting the younger laborers by their counsel and experience; and, above all, the happiness of communing with the Great Friend of all, — the Friend who has been with them all through life, faithful amid all its changes, is theirs still.

Such persons, who have spent their lives in the service of God and humanity, though their bodies must decay, their spirits, blooming in immortal youth, will find their place in the better land, where sickness and death cannot come, and where partings are unknown.

CHAPTER XII.

THE HOUSEHOLD.

LITTLE CHILDREN.

HOWEVER roomy a heart one who takes a child into his love may have, that child will fill it all. The children that are in the world keep us from growing old and cold, and with their pleasing eyes win us back, or keep us from becoming overwhelmed with the cruel cares of business life. A poor couple, with no one to love and to love them, is a most pitiful picture. Having no expansive power in their souls, they shrivel up more and more with every wrinkle which time furrows upon their brow; while, with the love and companionship of children, the heart and soul expand; and a hovel, with a small face to fill a broken pane here and there, as a stranger goes by, is robbed of its desolation, and becomes to the inmates a palace.

We have at times been more than half inclined to think that we all do about as much good in the world by expanding the hearts and souls of others, before we are seven years old, as we *ever* do, and certainly a great deal less evil.

Children are the most powerful allies humanity can enlist. We call them "hopes" sometimes, with a half laugh; but we may give them a better name, and be too happy about it to laugh; we may call

them hope-makers, for such indeed they are. We are so constituted that, from our very nature, we love not those most who help us most, but those we help most — those most dependent upon us for help. By the exercise of this innate feeling in the human heart, many a prodigal has been welcomed home with a feast, who otherwise would have remained in the corn-field, living upon the husks left him by a cold-hearted world.

A house full of children composes as powerful a group of motives as ever moved a heart or hand ; and the secret of many a gallant struggle and triumph in the world's battle may be throned in a mother's lap at home. A nation's hope was once found in a basket of bulrushes. We know very well that children are often spoken of by the cold-hearted as "small affairs." But such persons are ignorant of the power or influence of children. The real weight of an infant, a youth, or even of a man, has never yet been ascertained. The scales upon which we are accustomed to weigh pork, beef, and other commodities, may determine the amounts of solids and fluids, or the material of the "house we life in ;" but this has very little to do with the real weight of the "tenant." Weight of character, or the power of the man, cannot be measured by any human means. When the mother of Washington was dandling her son upon her knee, little did she know the weight of the *man* which was done up in that small bundle of humanity.

Upon the scales, Sir Isaac Newton, when an infant, would not weigh more than fifteen or twenty pounds, but he afterwards weighed the world upon his scales ; and the sound of his very name carries a *weight* with it which sends a thrill of joy through the heart of every man of science in the universe.

The real weight of the *man* is well illustrated by an Indian, who, when asked how much he weighed, replied, "As I am, I weigh one hundred and fifty pounds; but when I am mad, I weigh a *ton*." This Indian, in his native simplicity, felt that, although his body was but small, when the *man* was aroused, his weight was tremendous.

Judge not, then, harshly of children, but remember that on them hangs the future destiny of our race. It is true that children are often noisy and perplexing, and no doubt many persons at times half wish themselves away from their society. But this irritability of feeling is not natural, and only proves that its possessors are diseased or ill organized. We like the noisy prattle of children. We like an active boy, one who has within him the elements of success combined with the impulses of the age; one who can throw off surplus steam in youthful glee, and in after years appropriate it to its more legitimate uses. And we certainly pity, and feel almost like shunning, the man that children are afraid of; and we are always sure that he who hates children is not himself worth loving. Blessings upon the little children, "for of such is the kingdom of heaven."

MEDICINE FOR INFANTS. — We are often asked by apparently sensible mothers what they shall give their babies to make them good-natured. They will frequently tell us that they have given paregoric, Mrs. Winslow's Soothing Syrup, Bower's Carminative, and a host of baby-fixings "too numerous to mention;" but from some cause, to them inscrutable, all have failed, and the more they give, the crosser the babies are, till finally they can stand it no longer, and *must* have something to keep their dear ones good-natured.

We assure you, mothers, that we feel a great interest in the welfare of the little ones ; and your importunity in their behalf certainly calls for a response ; and we are going to tell you what we think of the course you have taken, and then add a little advice, and hope it will be kindly received. In the first place, then, always be good-natured yourselves. By so doing you will make those about you much more happy, and your children will not be likely to *inherit* peevish or fretful dispositions. In the second place, give your children good air and proper food, at proper times, and do not teach them drunken habits by feeding them upon the various baby-drops which your importunity has caused to be prepared, and then they will not be forever fretting and crying after those miserable preparations of *rum*, opium, and sugar, of which these baby mixtures are made.

If you are obliged to leave your infant to the care of a nurse, look to it that she is not in the habit of forcing the little one to sleep by the administration of morphine or opium in some form, which nurses are in the habit of carrying about with them, to keep the infants under their charge quiet, that the serenity of their own minds may not be disturbed by the music attendant upon the free exercise of the child's lungs.

The constitutions of children are easily acted upon, and this kind of drugging tends to create a similar morbid appetite for stimulants in children, that the use of tobacco and dram-drinking does in toppers of a larger growth. The narcotic effects of opium, in connection with stimulants, not only create a morbid appetite, but derange the nervous system, making children cross, peevish, fretful, and thirsty, inducing them to overload their stomachs, producing dyspepsia, flat-

ulency, colic, and other apparently alarming symptoms, which are, perhaps, enough to produce regular hysteria in the half-scared nervous mother or nurse.

Without accusing any among our readers of getting their children intoxicated, or of even inducing an appetite tending to intoxication, we would like to have all carefully contrast the condition of their peevish, cross, drugged babies (or, rather, their neighbor's) with the condition of persons of larger growth who are under the influence of narcotic drugs or intoxicating liquors. You will find in such a contrast some analogy, or at least some food for useful reflection.

We have contended upon this point thus strongly, for we feel that the subject has not received that attention which its importance demands. Every intelligent and experienced mother will, on reflection, acknowledge that there is more truth than poetry in what we have said; and if so, it should suggest to themselves as well as others, the importance not only of correcting past errors, but of avoiding similar ones in the future; for we believe that God will hold the parents responsible, to a very great extent, for much of the drunkenness and dissipation of the present generation.

We do not wish, however, to lay everything to the improper treatment of babies; for there are other errors in life equally baneful. But we are now speaking of this peculiar evil; and we can assure you that this morbid appetite, created in infancy, does not lessen as the child grows up, but is liable to develop into an embryonic demon, which grows with age, and may plant its fangs so deeply in the constitution as to be ever present, to make man's pathway through life one of thorns and misery.

Children do not need medicine unless they are sick, and then only of the mildest kinds. Instead, then, of giving poisonous drugs, give your children fresh air, frequent baths, and well-regulated diet. And instead of cross, peevish babies, you will have nice, fat, rosy-cheeked, laughing fellows, that will not only prove a delight to the household, but offer a fair promise for future usefulness.



FAMILY GOVERNMENT.

The government of children has been a source of dissension in the household since the world began, and will be, probably, till the "new heaven and the new earth" are produced. Children ought to be an element of harmony in the family, and to bring to parents united counsels and co-operative love. In many cases this is the happy result. Where it does not produce this effect, it may be from a variety of causes. Since men do not as yet produce angels, but only little, unripe men over again, children must always be a source of more or less trouble, inconvenience, and annoyance in the household. Both parents must take their share of the patience inevitably required. Among other things, children must have a safety-valve to let off their surplus spirit; they must not be too sharply curbed; and yet, for their own good, and for the welfare of the family, they must not be lawless or boisterous. Out of doors, and in the play-rooms, remote from hearing, let them shout. It is good practice for the lungs. But in or near the common sitting-room, they should be trained to quiet-

ness and politeness. It is best that they should early feel the responsibility of contributing to the common good. The household is a little commonwealth. The child is a new citizen; he must early be taught the duties of citizenship. It is an evil influence which permits the child to sacrifice every person's comfort in the house for the selfish sake of its own enjoyment. It may be pleasant to the child for the moment, but it sacrifices a higher good. A child cannot too early learn order, subordination, obedience, and a willing contribution of its own pleasure for the good of others. If restraint, or even discipline, be needed to secure these results, it is best that the child be subject to them. Health and freedom may be secured without allowing children to make nuisances of themselves. Besides, it is cruel for parents to leave their children untrained and boisterous, to grow up objects of dislike to all about them. Untrained children are the neighborhood talk. Parents have no right, by neglect of discipline, to subject their children to such odium. We admire parents who insist upon an orderly family, where children are not vexatious despots; where friends may feel reasonably safe from an interruption of bears and buffaloes in human form; and where the sharp, irritable selfishness of over-indulged children shall not be their portion.

There can be no greater disaster in the home, no greater mistake in the attempt to manage a family, than the failure of the two parents to make their authority absolutely one. The household in which, for any reason, or from any cause, a conflict of authority exists, is the saddest of sights to one who wishes well to children. There should be earnest conference between parents concerning the best methods and ob-

jects; there should be perfect unanimity in the general system of management adopted by them. It is unspeakably better to make some mistakes in unison, than to let the minds of children get confused as to whom they shall obey. Let the father and mother speak with one voice, if they wish the voice of either to be respected. Appeals from one to the other should never be permitted. Where this is allowed, wretchedness of many kinds ensues, and management gives place to mismanagement.

A family is a little empire. The parents are the sovereigns. This sovereignty should be constituted in wisdom, and restrained by affection. The authority is derived from the fountain of all power, and with it is connected immense responsibility. To the government thus constituted, unreserved obedience is required, or its noble ends can never be fully answered.

The family is the empire of thought, and the birth-place of both body and mind, happy when some auspicious star of hope hovers over it. In the family, trains of associations are commenced which are imperishable; habitudes into which the very soul is moulded; impressions engraven, which no lapse of time can obliterate, but which eternity itself will but confirm and perpetuate.

The surroundings in which children are reared, also, go far in developing the mind and in cultivating tastes, either for that which is refined and beautiful, or that which is coarse and uncomely. The living-room should not be a homely, matter-of-fact apartment, consecrated to the utilities, while the Muses and Graces are left simply to adorn the hall. On the contrary, we want in the living-room, for a foundation, that the furniture shall be the best designed and

best made that we can afford, and all of it intended to be used, and necessary to our comfort; not an article to be allowed that does not earn its living, and cannot prove its right to be there. These wants being provided for first, then admit the ornaments of life, — casts, pictures, engravings, bronzes, books, chief nourishers in life's feast; but in the beginning, these are to be few, and of the choicest, and the greatest care is to be taken in admitting a new comer. The room, from the very first, ought to represent the culture of the family — what is their taste, what feeling they have for art; it should represent themselves, and not other people; and the troublesome fact is, that it will and must represent them, whether its owners would let it or not. If young people, after they have secured the few pieces of furniture they must have, and made sure that they are what they ought to be, have some money left to get a picture, an engraving, or a cast, they ought to go to work to supply this want as seriously as they would the other, which seems the more necessary. We look upon this ideal living-room as an important agent in the education of life; it will make a great difference to the children who grow up in it, and to all whose experience is associated with it, whether it be a beautiful and cheerful room, or only a homely and bare one, or a merely formal and conventional one. The relation of these things to education is all that gives any dignity or poetry to the subject, or makes it allowable for a reasonable man to give much thought to it. But it has a real, vital relation to life, and plays an important part in education, and deserves more consideration than it receives. It is, therefore, no trifling matter whether we hang poor pictures on our walls or good

ones; whether we select a fine cast or a second-rate one. We might almost as well say it makes no difference whether the people we live with are first-rate or second-rate.

The well-regulated family embraces in itself all the elements of moral power and social order, and is the very foundation of civil society, whose dignity, advancement, and prosperity, in every form, depend upon the same qualities which we find so essentially necessary to the perfection of the family.

The only road to the perfection of civilized society is in the development of the higher social qualities in the family. The restiveness of people, and the moral and political factions which distract society and disturb the peace of nations, first commenced in the violation of the sanctity of home, and have their growth with the growth of the inmates of those homes; the lack of order and discipline which commenced with the boy in the family we see acted out by the man in the nation. To reform the people of the nation, we must educate the rising generation of better principles.

We should always be prudent in our speech before children; and here parents, as well as others, are at fault. Children have as many ears as grown persons, and they are generally more attentive to what is said before them. What they hear they are very apt to repeat; and as they are not likely to exercise discretion, and have not sufficient knowledge of the world to disguise anything, until they have learned to practise deception, it will generally be found that "children speak the truth."

It may be, at times, necessary to censure and punish. But much more may be done by encouraging

children when they do well. Be, therefore, more careful to express your approbation of good conduct than your disapprobation of bad. Nothing can discourage a child more than a spirit of incessant fault-finding on the part of its parent; and hardly anything can exert a more injurious influence upon the disposition, both of parent and child. There are two great motives influencing human action—hope and fear. Both of these are, at times, necessary. But who would not rather have a child influenced to good conduct by the desire of pleasing, rather than by the fear of offending? If a mother never expresses her gratification when her children do well, and is always censuring them when she sees anything amiss, they are discouraged and unhappy. They feel that it is useless to try to please. Their dispositions become hardened and soured by this ceaseless fretting, and, at last, finding that whether they do well or ill they are equally blamed, they relinquish all efforts to please, and become heedless of reproaches.

But let a mother approve of her child's conduct whenever she can. Let her reward him for his efforts to please by smiles and affection. In this way she will cherish in her child's heart some of the noblest and most desirable feelings of our nature. She will cultivate in him an amiable disposition and a cheerful spirit.

Do all in your power to teach your children self-government. If a child is passionate, teach him by gentle means to curb his temper. If he is greedy, cultivate liberality in him. If he is sulky, charm him out of it by frank good humor. If indolent, accustom him to exertion; and train him so as to perform onerous duties with alacrity. If pride comes in to make

obedience reluctant, subdue him by counsel or discipline. In short, give your children the habit of overcoming their besetting sin.

As we are all only children of a larger growth, and equally the subject of government, we should learn to pay that respect to those in authority which we require of our children. When we all come to realize this fact, we shall hear less about the rights of individuals, and more about their duties.

Individuals and communities have set up false standards of rights, and seem to have almost ignored the existence of duties, unless it be a duty for them to obey their own inclinations, to the total disregard of the rights of others, and often in scorn of law and the public good. We do not wish to borrow trouble, or be considered prognosticators of evil, but we do feel that this abuse of the principles of freedom has become a national sin,—a species of insanity, or disease, which, if not checked, is likely to subvert the principles of Christian freedom and political liberty. These disturbing influences are found in all departments of life, in the family, in the neighborhood, and in the church, as well as in the nation. Our moral principles and our religious faith should keep us all from acts of violence and disorder. A religion that never suffices to *govern* a man will never suffice to *save* him. A religion that does not sufficiently distinguish one from a wicked world will never distinguish him from a perishing world. What is needed for the church and state is personal religious effort, a yielding of our selfish feelings and interests for the good of others, a united effort to educate and train the minds of the people to moral and religious truths, to harmonize our physical constitutions and conditions to the necessities

of the world, and our hearts and souls to the better world to come. The general government, the family, and the church embrace in themselves all the elements of moral power, of social order, and religious development. The only road to the perfection of civilized and religious society is in the development of our social and religious natures. Let all bow in submission to those whose right it is to rule, whether in the family, the school, the church, the state, or the nation, and strife and contention will cease, and we shall begin to realize something of that type of ultimate submission which will be paid to the Father of all by his redeemed family in heaven.

CHAPTER XIII.

WOMEN.

WHY THEY LOSE THEIR HEALTH AND BEAUTY.

MANY of our women, being shut up in houses much of their time, with little exercise, and that often irksome, are, as a consequence, unnaturally pale and feeble; their blood being but partially supplied with oxygen, their nerve and muscle are necessarily weak, and the tissues of the body imperfectly organized. The force and functions of the whole system are, therefore, lacking in that vital action so necessary to sound health. In young girls, who are brought up without sufficient exercise in the open air, there is often found an unnatural fulness, which disappears whenever the endurance of the system is put to the test. The change in appearance from the maiden to the mother is often so striking that it is difficult to believe that we are looking upon the same person. The round, pleasing shape is prematurely displaced by a pinched angularity, and an untimely and unseemly appearance of age. Travellers from other countries, who have had an extensive means for observation and comparison, have remarked upon the great beauty of American women, and the early age at which it is lost. Some have ascribed this to the climate; but more intelligent observers agree that it is a hot-house,

enervating mode of life. English ladies of rank, who, by the way, are celebrated for keeping their beauty even to a ripe old age, think nothing of walking two or three miles at a time ; while American ladies would think such a thing “perfectly dreadful.” If American women, so daintily and richly fed, will sit in dark and sultry rooms the live-long day, they must expect to bloom too soon, to hasten through this charming period in a few years, and afterwards have the grim satisfaction of being thin, wrinkled, angular and sallow.

Many persons have a great horror of going out of doors for fear of taking cold ; if the weather is a little damp, or a little windy, they delay ; meanwhile weeks and even months pass away, during which they never breathe pure air. The result is, they become so enfeebled that their constitutions have little power of resistance ; the least exposure gives them a cold, which is often continued, and lays the foundation of general ill-health. Whereas, if the opposite practice had been followed, of going out for an hour or two every day, or as they could endure it, regardless of the weather, if it is not actually raining, a very different result would have taken place. The more persons are out of doors, the less liable are they to be affected by changes of temperature. Persons who live much in the open air seldom take cold, having acquired a power of resistance unknown to those who spend most of their time in-doors. Many of our ailments, and those of a most fatal form, are taken while in the house ; taken by removing parts of clothing too soon after entering our dwellings ; or lying down on a bed or sofa, without extra covering, when in a tired or exhausted condition ; or from having engaged

too vigorously in domestic employments. When our wives go to work, they get so interested to have everything about the house in perfect order, that they become utterly exhausted before they are aware of it; their ambition to complete a thing, to do some work well, sustains them for a time, until they find the mental and physical condition one of exhaustion. In this state a breath of air may give a cold, producing inflammatory rheumatism, sore throat, pneumonia, or other fatal forms of disease. Wives and mothers should work moderately. It is steady, regular labor which brings health, strength, and a good digestion. Fitful labor is ruinous to all.

One of the greatest causes of deterioration of health among women, especially among young women, is the system of social dissipation so prevalent at the present day. Listless idleness and seclusion in apartments where the air is heavy and saturated with perfume, and into which the sunlight rarely penetrates, are prolific sources of impoverished blood and a predominance of the nervous system. But a young woman thus immured during the day, shut in from every possibility of a breath of cold air, does not hesitate to go out into the damp cold night, be the weather what it may, half clad, with head and shoulders uncovered, boots thin as paper, to sit for hours in an ill-ventilated theatre or hall, or to enter into the diversion of the ball-room; indulge in a late supper of cream, ices, oysters, and jellies, and a few hours later, after having engaged vigorously in the dance, with pulse beating wildly, with every pore widely open, again passing out into the frosty air, that chills her whole being with its icy breath. And when this course of imprudent dissipation is continued, is it any wonder that the

young lady of fashion becomes listless, enervated, and finally falls into premature decay? In the preceding pages we have endeavored to explain some of the extraneous causes which aid so materially in the degeneration of women. But there are other causes intimately connected with their own bodies, causes of which women seem to have little or no idea, the disastrous results and multiform miseries of which are plainly observable, even to the most unthinking minds, affecting, as they do, not only the present generation, but the health and well-being of posterity.

Young women do not reach their maturity until eighteen or twenty; yet at sixteen or seventeen they are often wives and mothers, robbed of the rights and freedom of girlhood in marriage, crippled in growth and development: the vital forces needed to build up a vigorous and healthy womanhood are sapped, and perverted from their legitimate channels in the premature office of reproduction. When the body is overtaxed, the mind loses its tone, and settles down into a gloomy discontent that enfeebles the whole moral being. Feeble mothers bring forth feeble children; sad and dejected mothers those with melancholy dispositions and morbid appetites. Healthy, happy, vigorous womanhood would do more for the cause of temperance and moral reform in the future, than the best code of ethics or the wisest legislation possibly can. When woman, by the observance of the laws of life and health, is restored to her normal condition, maternity will not be a period of weakness, but of added power. With that high preparation of body and soul to which we have referred, men and women of sound mind and body, drawn together by true sentiments of affection, might calculate with certainty on

a happy home, with healthy children gathering round their fireside.

To us, one of the saddest features of woman's present condition is her idea — false though it be — that she is cursed of Heaven in her motherhood. It may be one of Nature's necessities that she should suffer, to a certain extent, through the period of maternity. But most of her suffering is directly attributable to violation of so many laws of her being. The curse, as it is called, said to have been pronounced upon Adam and Eve, we think one of the greatest blessings bestowed upon the human race. The labor which man is called upon to perform is certainly for his best good; and the suffering of woman during the period of maternity — which is Nature's necessity, and not the result of constitutional disease, or direct violation of physical law — has more than its full compensation in the endearing ties which bind together families, churches, states, and nations. Cain was cursed of God for the murder of his brother; and we read that the *earth* was cursed on Adam's account; but we read of no curse being placed upon Adam or Eve. To be sure, woman's sorrows and conceptions were greatly multiplied; and she received with the blessings of life the cares consequent upon rearing the family, and peopling the earth with intelligent beings.

The popular idea that women are worn out by the necessary toil and care connected with raising families, is not supported by fact, unless it be in consequence of physical labor inconsistent with their condition. Not only our own observation, but all history shows that the woman who has been the mother of half a score of children has enjoyed more vigorous health, and lived to a riper old age, than she who has failed

to fulfil this important law of her being. We believe that the efforts at the present day, made to avoid propagation, are a thousand-fold more disastrous to the health and constitution, to say nothing of the demoralization of mind and heart, than the fulfilment of any function required by Nature. The duty of our position in society, and our aim in aiding to solve the problem of health, and promoting human happiness, render it imperative that we should give the subject of infanticide more than a passing notice.

What are the reasons urged for this demoralization of mind and heart? "Children are so expensive; the demands of society, the cost of food, clothing, education, is so great that we could not decently live with a family of children," urges one. Another, with means in abundance, says, "The care of children is such a slavery." This one is fond of show and company; that one intends to travel; and neither are willing to be troubled with the care of children.

Such are the excuses offered, such are the reasons for which women violate the laws of their being. And when, in after years, "their house is left unto them desolate," no prattling children to while away the dreary hours, no sons, no daughters, to aid their faltering footsteps, and smooth the downward passage to their premature grave, bitterly and with vain regret do they repent their past folly in so guiltily despising this Heaven-given blessing.

We have spoken of the moral evil of this practice, but there are also physical evils, equally apparent; evils which often render women weak, and powerless to fulfil the functions required by Nature. A large portion of the manifold afflictions under which the women of to-day groan, are directly traceable to in-

juries resulting from this cause. Be assured this is not exaggerated, for we cannot call to mind an individual, who has been thus guilty, who has not suffered afterwards in consequence. And when health is apparently restored, the freshness of life has gone, and much of the vigor of mind and energy of body have forever departed.

We have ever manifested our utter abhorrence of this practice. No word of ours shall palliate the offence, no false delicacy extenuate the crime. We have not attempted to exhaust the subject by lengthy details, nor have we given but little idea of its prevalence. The terrible evils accruing are but little understood, and far less realized. And if, by these few words, we have been able to lead one soul back to the path of right and duty, we shall feel amply rewarded; but our main hope is to so expose the evils, the sorrow, and suffering attendant upon such a course, as shall deter others from indulging in such unholy thoughts; to prevent them from seeking to desecrate their holy office; to point out the terrible and disastrous results sure to follow to their own system, and the evils likely to be transmitted to posterity; and to lead them to a due realization of the fact that God's law cannot be discarded, superseded, or neglected with impunity.

CHAPTER XIV.

MARRIAGE.

MARRIAGE is a religious, a civil, and a legal contract, wisely instituted for the happiness and prosperity of the race. We were created rational and social beings, and our chief delight and happiness are found in the social relations of life. God gave Eve to Adam as a companion and friend, to be nearer and dearer than anything else on earth; and all experience proves that the perfection and sincerity of friendship can only be found in the marriage relation; in that unity of thought and sentiment, that intensity of feeling and interest, which shut out from the soul all petty jealousies and vexations. The qualities essential to true conjugal happiness must exist in the mental, moral, and physical condition of the parties, or love, however pure, can never have its perfect work. Love is the basis of all associations, and of all civilizations. But, with all its heavenly associations, it can never bring perfect harmony out of discordant elements.

Persons meditating marriage should, therefore, be very cautious and considerate, and study each other's character well before engaging in this solemn contract.

The first requisite for a happy and congenial marriage is love. True love is founded on esteem, and esteem is the result of intimate acquaintance and

confidential intercourse. This is the origin of pure, virtuous love. Marriages based upon this are the only perfectly happy ones; those based upon graceful figure, bright eyes, wealth, or title, are usually unhappy and unholy. Love exerts a wonderful power in elevating and purifying human existence; it is the most ennobling of all emotions, and the tenderest of all sentiments. It ever stimulates the good, and suppresses the bad, if kept in a proper channel, and guided by pure affection. But in order to engender happiness, it must be reciprocal. The yearning of the soul is to love and be loved; and without this reciprocity of affection, human life becomes a purposeless existence. He, therefore, who contracts marriage in order to gain fortune or position, forfeits the highest happiness this life affords. An eminent divine truthfully states the results of such marriages in the following passages:—

“Who marries for love, takes a wife; who marries for fortune, takes a mistress; who marries for position, takes a lady. You are loved by your wife, regarded by your mistress, tolerated by your lady. You have a wife for yourself, a mistress for your house and friends, a lady for the world and society. Your wife will agree with you, your mistress will rule you, your lady will manage you. Your wife will take care of your household, your mistress of your house, your lady of your appearances. If you are sick, your wife will nurse you, your mistress will visit you, your lady will inquire after your health. You take a walk with your wife, a ride with your mistress, and go to a party with your lady. Your wife will share your grief, your mistress your money, and your lady your debts. If you die, your wife will weep, your mistress lament, and your lady wear mourning.”

Men need wives, not alone to take care of their houses and cook their meals, or see that these are properly attended to. Such things are important, and the wise young man will look after them; but what the true man wants with a wife is her companionship, sympathy, and love. The way of life has many dreary places in it, and man needs a companion to go with him. A man is sometimes overtaken by misfortune; he meets with failure and defeat; trials and temptations beset him, and he needs one to stand by and sympathize. He has some hard battles to fight with poverty, enemies, and with sin; and he needs a woman that, when he puts his arm around her, he feels he has something to work for and to live for, and that she will help him to fight the battle of life; that she will put her lips to his ear, and whisper words of counsel, and her hand to his heart, and impart inspiration. All through life, through storms and through sunshine, conflict and victory, through adverse and through favoring winds, man needs a woman's love. The heart yearns for it. A sister's and a mother's love will hardly supply the need.

But although reciprocal love is the prerequisite of a happy marriage, there are other considerations which should engage the earnest attention of those about to marry. There are incompatibilities of temperament, a want of harmonious adaptation, that, however strong the love between the parties, will inevitably render married life anything but happy. The chemist knows that if two elements are brought together which are incompatible in their natures, no amount of shaking or trituration will make the contrary elements act affinitively. So no love, no amount of association, can bring discordant natures into harmo-

nious existence. We do not mean that persons of inharmonious dispositions may not, by an exercise of their better natures, and their mutual affection and respect, live in apparent happiness; but they fall far short of attaining that high state of conjugal felicity which should characterize the marital relation.

For this reason lovers should study well each other's merits and demerits. Circumstances that scarcely ruffle the temper before marriage, might afterwards provoke discord and strife. "Love is blind," it is said; but the eyes should not be blindly closed against that which, in after years, will prove a source of discontent and unhappiness.

The tastes should not be dissimilar. To the social wife, the boorishness and unsociability of the husband will be a constant source of discontent; while the "man of the world" will never be satisfied if his wife is not fond of society and show. The man who loves children will never pardon a lack of maternal feeling on the part of the wife, for to his mind it argues an unwomanly quality.

It is not necessary that all the minor tastes, the likes and dislikes, should be similar; that the wife should agree with her husband in everything. On the contrary, a never-varying, bland temperament is most deplorable, and results in discord rather than union. But there should be no strong contrasts of character, no material difference of tastes, that may in after life prove a source of dissension.

Health should be a consideration of paramount importance in the selection of partners for life. No person has a moral right to enter into the marriage relation who is affected by diseases which are liable to be transmitted to posterity. The apparent cruelty

of denying the consumptive, or those tainted with scrofula, syphilis, or insanity the gratification of their affections, is more than compensated for when we remember the suffering and sorrow such marriages almost inevitably entail. Nor is the evil lessened if one of the parties be in perfect health. Vigor and debility are constitutional opposites; and the union of the sound and the unsound can but be productive of suffering and disease.

In regard to the respective ages of the parties, it is best that they should be nearly the same, the husband, if either, being the older. The union of a young lady to an old man, or the reverse, is rarely followed by happiness to either. Such marriages are seldom the result of a mutual love; one of the parties is sure to be actuated by other motives than that of conjugal happiness, and the union is usually enforced by the opportunity of enhancement in respect to wealth or station in society.

Such marriages are physiologically injurious. The vitality and magnetism must be nearly equal, that the interchange of life may be mutual, and not thrown out of balance by too great a disparity of years.

It is a law of Nature that animals of like age only should mate together. The old bird does not mate with the young, but "pairing" always occurs between those of the same year's brood.

Thus it will be seen that the union of the old and young is a moral evil, because such a union nearly always lacks a mutual love, debasing marriage to further selfish interests; and that it is a physical wrong, as it deteriorates health, engenders disease, and entails upon posterity weakness of mind and body.

In closing, we would caution all married people,

if they would attain that happiness which the conjugal relation affords, to aid each other in the effort, and to direct their energies to the accomplishment of the same purposes. The best-meant efforts are often fruitless, because exerted in the wrong direction. The married pair should be in reality *helpmates*. It should be the effort of both to make the home the dearest place on earth to them; and when this is accomplished, happiness is certainly achieved. Much of the bitterness of married life is caused by petty disagreements, which are alike discreditable to the husband and wife. Each should study the happiness and welfare of the other; they should regard each other's wants and desires, and make earnest endeavor to supply them; and then contention and discord would be unknown elements in the family. There may be a way to win by commanding; but it is better to command by winning; and if this were more generally remembered and acted upon, harmony and concord would take the place of disagreement and strife.

The married couple should look after their mutual well-being. They should watch over their mental, moral, and physical natures with the greatest assiduity, considering themselves the laboratory in which the world is to be peopled and the race perpetuated; and they should feel that any departure from rectitude may leave its stamp upon futurity for all coming time.

Never forget the days of your early love and the scenes of your courtship, when all the tender ties of your nature were brought into action. Never forget the pleasure and joy you experienced in the expression of the tender sentiments of your loving hearts. These times and occasions should never be forgotten

or lose their interest. Husbands and wives need, and have a right to expect, increased attention after marriage; and no true and faithful man or woman will allow the ardor of youthful love to degenerate into cold indifference or neglect. This love, which is from God, and of the heart, should ripen into a more substantial and perfect love; and as you pass on life's journey together thus united, it should be like a mighty river, growing broader and deeper.

CHAPTER XV.

HEREDITARY DESCENT.

PERHAPS there is no other subject upon which medical men differ so widely in their views, and about which more erroneous theories exist, than that regarding the laws of hereditary descent. Our knowledge upon the subject is far from perfect; but, notwithstanding the conflicting opinions, there are a few facts which long experience and observation have demonstrated to the satisfaction of even the most incredulous.

The great law of hereditary transmission is nowhere more perfectly seen than in the nationality of people. Races maintain their peculiar traits, their distinctive cast of feature, and even the same general character, generation after generation. A Jew, a Chinese, or an Italian is readily distinguished, wherever found, by his national peculiarities. Even in intermarriages between different races, the distinguishing characteristics of each race are plainly perceptible in the descendants.

The same thing is discernible — although, perhaps, not to the same extent — in families. Parents frequently live again in their offspring. It is certain that children resemble their parents, not only in countenance and the form of their bodies, but also in their

mental dispositions, and in their virtues or vices. It is difficult to understand how a certain character or constitution can be transmitted from parent to child, and it is equally difficult to account for resemblance of feature. But it is no more strange and incomprehensible than a thousand natural phenomena which take place daily about us, and which we never dream of explaining. No one wonders that an acorn will produce an oak; and no one will deny that, as the parent oak is, in strength or weakness, beauty or unsightliness, so will the offspring be. If, then, mental qualities and physical constitutions are reproduced in children, exercising the greatest influence over their future happiness and well-being, it becomes not only important, but a duty, to understand as far as possible the laws by which this transmission takes place.

Proper attention to this subject would enable us to improve not only the constitutions, but the mental and moral character, of our posterity. We see men every day who are anxiously attentive to preserve or improve the breed of their horses or cattle, and yet who will taint the blood of their children, entailing on them not only the most loathsome diseases of the body, but in many cases vice, and the most unworthy dispositions.

We shall briefly consider the laws governing hereditary descent under three divisions. First, transmission of conditions of mind and body; second, transmission of acquired habits; and, third, transmission of impressions made upon the mind of the mother while the child is in utero.

Physiologists and medical men generally are agreed that a vigorous and healthy constitution of body, with well-balanced mental faculties, communicates exist-

ence in the most perfect state to the offspring; and that, unless the conditions are such, the child will be, either physically or mentally, more or less imperfect. The transmittal of various diseases from parents to children is a matter of universal notoriety. It is not always the *disease* itself which is transmitted; but the organs are of such imperfect structure as to be unable to perform their functions properly, and so weak as to be easily put into a morbid condition by causes which sound organisms are able to resist. The system is, therefore, by the laws of hereditary descent, predisposed to such disease. There is scarcely a person who is not acquainted with some family tainted with hereditary consumption; some of the children weak and sickly all their lives; others apparently strong and vigorous during youth, but in whom the seeds of consumption are sown, and who almost invariably break down and perish ere they have attained full maturity. Scrofula has become so wide-spread that few families at the present day are entirely free from its taint. Insanity, or at least a predisposition to it, very commonly becomes hereditary in families, manifesting itself even in the third and fourth generations, and becoming to their posterity a source of ceaseless anxiety. Blindness, deafness, and other distressing maladies are handed down from parents to children through many generations.

In speaking of persons who are deaf and dumb, Dr. Mason Good observes, "that when the defect has once made an entrance into a family, whether from the influence it produces on the nervous system of the mother, or from any other less obvious cause, it is peculiarly apt to become common to those children which are born afterwards, insomuch that we often

meet with instances in which the first-born, and, in many cases, every individual of the progeny, is suffering from the same distressing evil."

In regard to hereditary blindness, "The Athenæum" makes the following statement:—

"The most remarkable fact about this is the number of blind children frequently found in the same family, evidently in consequence of the continued operation of some unknown cause connected with the parents. Three, four, and five blind children are not uncommonly met with in one family, and in some instances there have been as many as seven."

We cannot estimate the physical evils which are thus propagated to posterity. Not only are diseased and misshapen bodies bestowed upon children, but perverted mental qualities and deficient intellects are left, a blighting heritage, to fill their future lives with bitterness and woe. Persons who neglect their mental culture, or live riotous and profligate lives, are little aware that they are liable to transmit to their children the same mental disqualification, and a taste for lawless dissipation; they little dream that they themselves fix, to a great extent, the characters, dispositions, and mental powers of their offspring. And when years of experience have sobered and modified their mode of life, they wonder why Heaven has afflicted their children with such weak intellects, and addicted them to idleness and vice, not comprehending that the fault lies, in a great measure, with themselves.

The more highly-cultured and better-educated the parents, the higher will be the order of their offspring, physically, mentally, and morally. If this were not so, there could be no improvement, no growth of culture and morality among people; families, communi-

ties, and nations, instead of advancing in literature, art, and general refinement, would maintain the same level generation after generation. On the other hand, the fact is no less palpable that, if the parents are given to vice, their children will almost invariably follow their example, only to a greater degree; and thus, by successive generations, the standard of morality becomes gradually lowered. In proof of this, we have only to recur to history to show that whole nations have, by becoming steeped in vice and degradation, perished by their own folly, only their name remaining a lasting monument of their ignoble fall.

If, then, physical and mental conditions of the parents so nearly concern their offspring, it devolves upon us all to give such attention to mental culture and the laws of life as will enable us to transmit to our posterity the highest development of intellect, and sound and vigorous constitutions.

Nothing can be more absurd than to suppose that physical deformity, debased mental qualities, idiocy, or idiotic children, can be the offspring of parents in sound physical health and normal condition of mind. There must be a cause, and somewhere a responsibility, for all these congenital anomalies; and how far it is within the control or power of parents to prevent these unnatural phenomena, or within the ability of the offspring to overcome their evil effects, has already begun to agitate the public mind, and is to become one of the greatest questions of medical jurisprudence.

An abnormal predisposition in the parents will almost inevitably perpetuate a preponderance in that direction in the progeny. The high nervous tension, the result of our overwrought civilization, — and which is the characteristic of the people of this country, —

easily develops into mental derangement in the issue. We see, every day, men physically weak but intellectually strong, and the opposite of this; and far more often, though we seem but imperfectly to realize it, we behold persons physically and intellectually sound, whose moral and spiritual qualities are at the lowest ebb. This shows the great need of a higher moral discipline, of directing educational influences to the formation of personal character, and to the cultivation of the higher and spiritual nature. Men go through life bending all their energies to physical training, to intellectual culture, and the acquisition of knowledge, and yet never seem to realize that they have a moral and spiritual nature, without the elevation of which all other acquirements, all intellectual and physical culture, falls short of developing a perfect manhood.

Not only should this higher cultivation be the object for which individuals should strive, but it should be the aim of all training and discipline in the family, in the school, and in the church.

Persons who have already inherited some weakness, some defect of mind or body, should see to it that they better their condition as far as possible, that they may transmit a higher order of life to their children, and thus in time eradicate the weakness from their posterity.

There is little doubt among scientific men of the present day that acquired habits are transmissible from parents to children. The belief is based not only upon actual experience, but upon analogy between man and the lower animals. For instance, the breed of dogs, called *pointer*, is endowed with the natural instinct of winding game, and has been taught to stop and point out the position of the game to the hunter,

instead of springing upon it at once. This habit, becoming fixed in the dog, is inherited by its progeny, who may be seen, while still very young, earnestly "standing" at swallows or pigeons in the farm-yard, while the offspring of an untrained dog not only never do this, but it is very difficult to teach them. The *Edinburgh Review* says, "Acquired habits are hereditary in animals. English sheep, probably from the greater richness of their pastures, feed very much together; while Scotch sheep are obliged to extend and scatter themselves over their hills, for the better discovery of food. Yet the English sheep, on being transferred to Scotland, keep their old habit of feeding in a mass, though so little adapted to their new country; so do their descendants; and the English sheep is not thoroughly naturalized into the necessities of its place till the third generation. The same thing may be observed as to the nature of its food. When turnips were introduced from England into Scotland, it was only the third generation which heartily adopted this diet, the first having been starved into an acquiescence in it."

From these facts it will readily be seen that habits are transmissible in animals; and what is true of the lower order is true of man. What was habit in the parent becomes a quality of the offspring. Who has not observed a peculiar gait, action, or expression in a person, reproduced in the child or grandchild? And who but will bear witness to the terrible results of evil habits in parents transmitted to their issue? Drunkards, creating an artificial taste for alcoholic drinks, which becomes a morbid craving in their children; smokers, and those who chew tobacco, imparting to their offspring systems to which the stimulus

of tobacco seems to them almost a necessity ; and revellers and brawlers, begetting children to whose restless nature the excitement of dissipation is the only pleasure. With these facts before us, we are culpable if we do not endeavor to preserve the *habitual* supremacy of our moral natures, avoiding those habits which almost inevitably bring misery and calamity upon our children. By these means we shall open a broader field of enjoyment, and a higher sphere of life, not only to ourselves, but to our posterity.

Impressions made upon the mind of the mother while the child is in utero, have been doubted by many as having any effect upon the unborn child. But when we take into consideration the many instances of transmission of physical and mental qualities which are inexplicable upon any other grounds ; that many eminent medical men have countenanced and sustained the theory, and that the facts have never been disproved, we must acknowledge that there is good foundation for the belief. During the whole period of organization, the ovum is capable of undergoing modification from impressions on the mind or senses of the mother. This opinion is very ancient, and may be traced to so remote a period that its rise cannot be attributed to the speculations of philosophers, and it is difficult to account for the origin of such a belief unless we ascribe it to facts which had been observed.

The vascular connection and intimate organic relation which exist between the mother and child, render it not only possible, but probable, that sudden and startling impressions which disturb the mind and derange the organism of the mother may be transmitted to the child. We all know perfectly well that if dis-

ease attacks the mother, the unborn child almost invariably suffers. In cases of mothers who have died of small-pox, syphilis, &c., the child has been found to have been afflicted with the same disease, the indications just as distinct as in case of the mother. Why, then, by the same means, should not other disturbances of function in the mother's system be transmitted?

The following case came under the observation of an eminent physician. A gentleman had a son who was in a state of idiocy. He was simple and harmless, but never could do anything for himself. The boy's mother was in sound mind, and had three other children, all mentally strong. The only account given of the condition of this son was, that some months before his birth an idiot lad came to the house. This idiot made a strong impression upon the mother, she complaining that she could not get his appearance removed from her mind. The son was weak in body and mind from birth, and had the slouched and slovenly appearance of the idiot.

We copy the following from a noted treatise: "The murder of David Rizzio was perpetrated by armed nobles, with many circumstances of violence and terror, in the presence of Mary, Queen of Scotland, shortly before the birth of her son, afterwards James the First of England. The constitutional liability of this monarch to emotions of fear is recorded as a characteristic of his mind; and it has been mentioned that he even started involuntarily at the sight of a drawn sword. Queen Mary was not deficient in courage, and the Stuarts, both before and after James the First, were distinguished for this quality; so that his disposition was an exception to the family character, and

must have depended upon the impressions made upon the mind of his mother during those scenes of violence and bloodshed."

The pre-natal influence for good or evil may be regarded as an established fact; for there can be no doubt that such influences impress the forming minds of offspring. Knowing this to be true, mothers should duly regard this law of nature, that they may introduce into the world such beings as shall ornament and benefit society. It is a lamentable fact that but a small proportion of those who find themselves *enceinte*, are happy in the thought. On the contrary, they rebel, and in many instances are desperate enough to destroy their offspring, rather than pass through the tedious and disagreeable ordeal of child-bearing. The great mental anxiety experienced under such circumstances must necessarily impress the unborn with an undesirable spirit, and not unfrequently with destructive tendencies.

Under the feeling of fear and dread at the prospect of maternity, or the despair and sadness from failure to destroy the fœtus, it is not hard to realize that weakness of mind and a gloomy and despondent disposition may be transmitted to the child, that may in after years lead to suicide from despair. We appeal to the honest convictions of mothers if they have not traced in their children the tastes and sentiments which they fostered, and the emotions which they experienced during the period of pregnancy. This being true, how rational to deduce that the mother, with her mind and heart bent upon infanticide, harboring thoughts that are alike cruel and wicked, should infuse into the very being of her unborn babe the same

qualities — a like cruel and inhuman propensity, which may lead to atrocity and crime.

Innumerable instances might be cited in proof of the transmission of impressions from mother to child ; but we have, perhaps, said enough to show mothers the intimate relation existing between their own bodies and that of their offspring, and to warn them to be careful of their tempers, to indulge no ideas that are not cheerful, and no sentiments that are not kind ; to beware of sudden mental shocks, and every disturbing influence which may be readily imparted to posterity, and which are often fraught with so much misery and calamity. We have been thus explicit upon this important subject, because its due consideration by parents is necessary to the solution of the great problem of health and human happiness.

CHAPTER XVI.

THE STOMACH AND ITS DIFFICULTIES.

MOST people eat twice as much as is needed, and ninety out of a hundred diseases are of our own making. The gentlemen who whirl about all day in their carriages, passing from house to house to minister to people affected with colds, bilious attacks, headache, nervous complaints, rheumatism, and other physical ills that afflict humanity, owe much of their occupation to the wrongs inflicted upon the stomach. People treat that organ, which prepares, in its wonderful laboratory, the streams that nourish the whole system, as if it were merely a convenient arrangement for the gratification of the palate and the appetite. As a rule, they do not even take the pains to lighten its labors by making their teeth do the rough part of the work, but bolt their food until the stomach is filled to its utmost capacity. They convert it into an organ of sensual enjoyment, forgetting that its office is to prepare supplies to repair the hourly waste of the body, and that as these supplies are healthy or unhealthy, so will the body be.

The stomach is made up of numerous muscles, all of which are brought into requisition in the process of digestion. But no muscle can work continuously. The busy heart has a season of repose between each beat. The lungs, also, have a short season of rest be-

tween each respiration. The hands and feet must have rest, and so with the muscles of the stomach; they only can rest when there is no work for them to do—no food in the stomach to digest. Even at five hours' interval, and eating thrice a day, they are kept constantly at work from breakfast until the last meal is disposed of, usually ten o'clock at night. And often we find persons partaking of hearty meals at this late hour, thus keeping the stomach in almost constant labor. No wonder that the stomach becomes debilitated, and that we have become a nation of dyspeptics.

Many people believe that two meals a day are sufficient; but no one should eat more than thrice a day, at regular times, and nothing should be taken between meals, the intervals being not less than five hours, as that is the time usually required to digest a full meal and pass it out of the stomach.

For persons who eat three times a day, it is amply sufficient to make the last meal of cold bread and butter, and a cup of milk or warm drink. This will soon beget a vigorous appetite for breakfast, so promising of a day of comfort. By omitting entirely the third meal, the individual, besides securing a night of sound sleep, will not find, on awakening in the morning, a bad taste in his mouth, so indicative of a foul stomach.

If one would always have a sweet mouth and a clean tongue, he can secure them both by simply ceasing to overtax his stomach. This frequent eating is an evil, mischievous habit, ruinous of both health and comfort; and it prevents the individual from receiving the great amount of enjoyment which it was intended he should receive from eating, and which is necessary to perfect nutrition.

Especially injurious is the habit of eating just before retiring for the night. The stomach, perhaps already enfeebled by constant working under disadvantageous circumstances, has now imposed on it an almost impracticable task, and the person lies down to sleep. Next morning he is nerveless — has scarcely slept all night — feels more wearied than he did when he retired. So far he sinks to mere animalism, living to eat; taxing his digestive apparatus at the expense of health, life, and life's enjoyments. So on, from day to day, till Nature makes a desperate effort to rid the body of the superfluous food introduced into it, burning it by fever, or expelling it by some remedial effort.

Persons deprived of their regular meals, or public speakers, who are obliged to use extra effort, returning home in the evening fatigued and exhausted, may find it better to eat a cracker, a bit of bread and butter, a little fruit,—something to relieve the sense of vacuity, and restore tone to the system, than to endure the gnawings of an empty stomach.



EATING WHEN SICK.

Invalids, as a rule, eat more than well persons, and are often invalids because they do. Almost the first question asked, when a member of the family is taken sick, is, "What can you eat?" When a young man has been surfeited, in season and out of season, until exhausted Nature gives way, and a fever is coming on, his friends anxiously inquire, "Now, John, what can you eat? You must eat something. People can't

live without food." Then come toast and tea, &c. The stomach is exhausted, and no more needs stimulants or food than the jaded horse needs the whip. What is needed is rest, complete rest. We believe that three quarters of the acute diseases might be prevented by a few days' abstinence from food, with good nursing, when the first indications of disease appear.

One of the premonitory symptoms of sickness is a loss of appetite. In this we see a wise provision of Nature, to prevent our taking into the stomach that for which the system has no need, and which, if taken, is always followed by evil consequences. Dr. Beaumont, who for many years had the opportunity of experimenting upon a person whose stomach had been opened by a musket-shot, says, "In febrile diseases, very little or no gastric juice is secreted. Hence the importance of withholding food from the stomach in febrile complaints. It can afford no nourishment, but is actually a source of irritation to the stomach, and consequently to the whole system." In the early part of many acute diseases there is a strong thirst, which may be alleviated by cold water, as liquids are readily absorbed, even in this state of the stomach. The water should not be taken in large quantities, but may be sipped often, and great advantage will be gained from the grateful, cooling influence upon the tongue and stomach.

Gradually, as the secretion of the gastric juice becomes established, the system will demand a little food, and only the most nutritious and that most easy of absorption and assimilation should be given. Such food as milk, beef tea, or barley tea, is preferable. As the fever abates, and the stomach assumes its normal

condition, the desire for food increases, and toast and fruit will be tolerated. In all cases the taste of the invalid should be consulted. The taste is a great index to the wants of the system, and, if followed, will rarely lead one amiss. We do not mean that the whims of the patient, the morbid appetite, should be gratified, but the steady, continuous craving for some one article of food will rarely be followed by evil consequences when satisfied. Of course the appetite must never be indulged to repletion, in which case great harm would result. But physicians and nurses should consult the feelings, wishes, and tastes of their patients, and not force them to eat that which is distasteful, for reason, humanity, and common sense, as well as our knowledge of Nature's laws, show us plainly that everything offensive should be excluded from the sick chamber.



GREAT EATERS.

Great eaters seldom live long. A voracious appetite, so far from being a sign of health, is a certain indication of disease. Some dyspeptics are always hungry, and feel best when they are eating; but they soon find that they have given the stomach work which it is not able to perform, and for which they must suffer the penalty. A healthy appetite is that which is inclined to eat moderately, and which, when satisfied, leaves no unpleasant reminders. Multitudes measure their health by the amount they can eat; and of any ten persons, nine are gratified at an increase of weight, as if mere bulk were an index of health; when, in

reality, any excess of fatness is, in proportion, decisive proof of existing disease, showing that the absorbents of the system are too weak to discharge their duty; and the tendency to obesity increases, in some cases, until existence is a burden. Particular inquiry will almost invariably elicit the fact that fat persons, however rubicund and jolly, are never well, and yet they are often envied.

While great eaters seldom live to old age, and are never for a single day without some "symptom," some feelings sufficiently disagreeable to attract the mind's attention unpleasantly, small eaters, those who eat regularly of plain food, usually have no "spare flesh," are wiry and enduring, and usually enjoy good health. Remarkable exemplifications of these statements are found in the lives of the centenarians of a past age. Galen, one of the most distinguished physicians among the ancients, lived very sparingly after the age of twenty-eight, and died in his hundred and fourth year. Ephraim Pratt, of Shutesbury, Mass., who died aged one hundred and seventeen, lived chiefly on milk, and even that in small quantities; his son Michael, by similar means, lived to be one hundred and three years old. And you will, on inquiry of old people generally, find that they attribute their longevity to abstemious living. The inference, then, is, that plain food and a life of steady labor tend to long life.

WHAT TO EAT.

There is a great deal of advice afloat that is not reliable as to what is good and what injurious for people to eat and drink. We may, very properly, adopt general rules; but they can never apply to all individual cases. Any person arrived at years of discretion, and possessing common sense, knows, or ought to know, what is good for him to eat and drink. The proper and best rule is, for persons to select from the variety offered, the kinds that, in their judgment, will be best for them, and partake with moderation; and they will seldom go amiss.

That the health and equilibrium of the system may be maintained, and the process of waste and repair may go on, there are three classes of food necessary to be taken into the economy: nitrogenous, that from which muscular tissue is produced; carbonaceous, or heat-producing agents; and mineral, from which the bone, and some other structures, are built. It is necessary, also, that these substances be taken in certain definite proportion, that the harmony of the system may be maintained, the economy being able to appropriate only a certain amount of each, and all excess is not only useless, but, by imposing additional labor upon the organs of excretion, in order to rid the system of the surplus, becomes actually injurious. These articles are so combined in Nature as to please the palate; indeed, the palate, in a healthy condition, is one of the greatest guides in the choice of food, and in regulating the quantity taken. A person surfeited with sweets, as cakes and candy, will still eat with relish meat or fruit. And the reason is, that the sys-

tem, although satiated with one kind of food, still hungers for that which it lacks, for that which the system still requires. Thus the natural and healthy taste indicates the needs of the body for the different kinds of food, without which the powers of life languish, and the body prematurely decays. It is an absolute impossibility for health to be maintained by a diet of any one of these three classes of food. Animals fed entirely upon fats and starch soon pine away and die. So children, brought up mostly upon cake and pastry, are invariably weak and unhealthy.

The muscle-producing agents, as albumen, gluten, and casein, as well as the heat-producing agents, as sugar, starch, and fats, are found both in the animal and vegetable kingdoms. Many of the mineral agents are also found in these combinations. But to reason, therefore, that man is to subsist entirely upon either animal or vegetable food is fallacious, inasmuch as Nature so formed our bodies as to eat, digest, and assimilate food from all these kingdoms. The difference in anatomical structure between man and beast, especially in regard to the formation of the teeth and digestive apparatus, will convince any one of the fact, if he will give it a few moments' consideration. Besides, the result of experience demonstrates that subsistence for any length of time upon purely vegetable diet is injurious, and that persons who partake of animal food alone are of a peevish, irritable temperament, and this, reacting upon the body, impairs the energies, and is productive of disease. The effect of climate makes a difference in the proportion of each class of foods required. Thus people of those countries near the tropics eat little animal food, while those of cold climates subsist principally upon fatty meats.

That there is too little care among the people of our land in the selection of food is apparent, when we learn of the cases of dyspepsia, humors, and general ill health resulting from this cause. Beasts of the field, by instinct, select such food as is in accordance with the wants of their systems, and the result is, that they never suffer from indigestion, and their offspring are usually vigorous and healthy, while the people of to-day, with their tastes depraved, eat fat meats, with rich gravies, puddings, and pastries, and the result entails disease and suffering upon themselves, and untold wretchedness upon their posterity. Children are not only allowed to eat when and what they please, but are forced to eat articles from which the greater part of the life-sustaining principle has been taken. A farmer knows well how to dress his land that it may yield the largest crops; he knows the needs of his oxen, and how best to fat his hogs; but of the wants and necessities of his children he knows comparatively little. To use the words of an eminent writer, "He knows that fine flour is not good for pigs, and he gives them the whole of the grain, or perhaps takes out the bran and coarser part, which contains food for muscle and brain, and gives them to his pigs, while the fine flour, which contains neither food for brain or muscle, he gives to his children."

The above aptly illustrates the prevailing fashion of living constantly upon bread made from fine wheat flour, from which the greater part of the nutritive principles have been taken. Flour is mostly starch — 68.7 per cent. Its formula or chemical composition is $C_{10} H_{12} O_{12}$ — three elements, Carbon, Hydrogen, Oxygen. The human body contains at least twelve elements, besides those of starch. How, then, can

flour be nutritious with about *three* elements, when it should contain *fifteen* elements, in order to properly nourish and sustain the human body? Dogs fed by Magendie on fine flour bread died in forty days; other dogs fed on wheat-meal bread flourished and thrived. The three fourth impoverishment of the mineral ingredients proved fatal to the first. Why should not mankind suffer in some manner from living on impoverished food?

The coarse, whole-wheat flour is best, being easier of digestion, and containing a larger amount of nutriment. Although wheat is undoubtedly the best of the cereals, one tires of the continued use of any one article; and as a substitute, rye, oat, and Indian meal, which are very nutritious, may be used.

One of the very best articles of diet is milk, containing, as it does, all the requisite elements of nutrition. All are ready to admit that milk is best for children, in fact, all they need when quite young; but as we are all only "children of a larger growth," if it were more generally used the standard of health would be greatly improved.

In closing this article, we would caution the people to avoid as much as possible the use of fats, especially that of pork. The old Mosaic law against eating pork has been a great safeguard against disease among the Israelites; and if this law was obeyed by people generally, there would be far less disease and premature death in our community. Experience and common observation prove that in communities far removed from markets, where fresh meat is seldom obtained, the people subsisting upon salt meats, principally pork, are more liable to cancerous and scrofulous diseases than people of cities, where they can procure

their meat and other provisions fresh every day. Sailors on shipboard, being obliged to subsist upon salt provisions, are often affected with scurvy and scrofulous diseases. That this is due, to a considerable extent, to the use of salt meat, is proved by the fact that their general health is improved, and in many cases they recover, as soon as fresh provisions are supplied.

“Give the devil his due,” is an old adage; and we feel that, to be just, we owe an apology even to the hog; for we doubt not that much of the disease which eating of its flesh imparts to mankind is the result of the manner in which it has been fed, and the confined position and bad air in which it is forced to live. To confirm what we have said, one has only to examine our slaughter-houses, where hundreds of hogs are huddled together, living principally upon blood and offal. We do not believe that pork is, or can be, a healthy food for man; but the evil effects are modified among those farmers who give their swine free access to the open air, and fatten them on corn and other wholesome food.

Especially should people who lead a comparatively sedentary life avoid fat pork. Persons who work hard in the open air may throw off its pernicious effects. The lumbermen of Maine subsist almost entirely upon pork and beans through the winter. But the same practice would be ruinous to health, even in the same individuals, did they spend their time in warm rooms, with less vigorous exercise.

People, as a whole, take too much liquid into the stomach. Intemperance, even in the use of cold water, creates an inflammation, or morbid craving for more; and the more a person drinks, the more he

wants. We would say, then, drink moderately. Pure water is, without doubt, the best. Tea is injurious, because it produces unnatural stimulation of the nervous system ; and coffee, because it checks the powers of absorption and assimilation, and also because it lessens the activity of the excretions. If something besides water is needed, drink milk, which has all the advantages of drink, and also nourishes and supports the body.

CHILDREN EATING. — When a child is observed to have little or no appetite for breakfast, sickness of some kind is impending. If, in addition to this indifference for food in the morning, there is a uniform desire for a hearty supper at the close of the day, a dyspepsia for life may be founded, which will imbitter many an otherwise happy hour ; or some other form of chronic disease will result, which medical skill may fail to eradicate.

This want of appetite in the morning, and craving appetite late in the day, is the creator of disease in multitudes of grown persons who have reached maturity in good health, but whose change of position, of business, or of associations, has led to the perversion of Nature's laws.

Young children naturally, in common with the animal creation, are greedy for breakfast, after the long abstinence of twelve hours. This is the natural arrangement, and it is wise.

Persons of intelligence cannot but know that eating heartily late in the day not only destroys the appetite for breakfast, but injures the health ; and the importance of attending to this subject is such, that we entreat all parents who have an abiding desire for the future happiness of their offspring, to give it their

mature consideration, their steady and prompt attention.

Allow nothing to be eaten between meals, and let the time of eating be fixed and regular, for Nature loves regularity. Let the supper be curtailed to the smallest possible amount, — a slice of toast, or bread and butter, or a cup of milk, — that the stomach may have rest during the night. The appetite for breakfast will soon increase, until it becomes a hearty meal, and all the exercise of the day will go on to its thorough digestion and perfect adaptation to the nutrition of the whole system. These rules are applicable to all, and if attended to, our health and happiness will be much augmented.

To sum up, then: Never overload the stomach. Eat at regular times. Never eat heartily, late in the day. During sickness the diet should be light but nutritious. Never eat when very much fatigued. Never eat just before you expect to engage in any severe mental or physical exercise. Never eat while in a passion, or while under any great mental excitement, whether of a depressing or elevating character.

CHAPTER XVII.

THE TEETH.

HUMAN beings are provided with two sets of teeth, which make their appearance at different periods of life. The first set appear in infancy, and are called temporary or milk teeth. The second set, which appear a few years later, continue until old age, and are named permanent.

The milk teeth begin to appear about the sixth month, though often later. The two incisors of the lower jaw generally come first, and then those of the upper jaw. Between the twelfth and sixteenth months the molars come, soon followed by the eye teeth. At the age of two years children generally have their full set of temporary teeth, twenty in number. After a few years these teeth begin to fall out, giving place to the permanent teeth, which continue to appear until the full set of thirty-two is made up.

The teeth were designed not only to assist in the process of digestion, by preparing the food for its reception into the stomach, but as an ornament to the face. At the present day a perfect set of natural teeth is a great rarity. There must be a cause for this marring of the human image. The teeth were made for service and for endurance, to last threescore years and ten, or the allotted period of a man's life; and it is only by some violation of natural laws that

people are afflicted with bad teeth. The causes which conspire to produce this evil should be examined, and means adopted to arrest the deterioration of teeth.

Parents whose teeth are poor almost invariably transmit a like predisposition to their children, and they in turn, from neglect or ignorance of the care of teeth, perpetuate in their issue a further tendency to degeneration, and thus the deterioration extends to successive generations. It will be seen that attention to the care of teeth will react as a blessing, not only to ourselves, but to our posterity; and it devolves upon us all to give that regard to the condition of the teeth, even though they be of an inferior quality, as shall tend to produce sound teeth in the offspring; and by early teaching children the necessity of the same care and attention, the evil may in time be eradicated from families.

But hereditary descent is by no means the only cause of the early destruction of teeth. There are other causes at work, which, through ignorance or neglect, are allowed to exert their pernicious influences. The stomach may be foul and disordered. In many cases the teeth are not properly cleansed; particles of meat or vegetables are allowed to remain between them, where they become decomposed. Sweets ferment, and by the corroding action of the acid thus formed, the enamel, or hard covering of the teeth, is destroyed. When the enamel is perforated the destruction of the teeth is rapid, as it is only by this covering that the inner structures are protected. For this reason, when decay becomes manifested, and a cavity, however small, has been formed, it should be immediately filled by an experienced dentist.

Another cause of defect or deficiency in teeth is the

lack of material for their formation in our daily food. Children brought up upon sweets, butter, and starch, can never have sound teeth, as these articles contain no silex or lime, which substances are essential in forming the teeth. Mothers of unborn or nursing infants, who live upon white bread, pastry, and confectionery, cannot yield to their offspring the requisite elements for the construction of perfect teeth. The teeth may appear well formed, but the enamel will be found thin, and of imperfect organization, and may be easily destroyed by the action of different substances taken into the mouth. In order to produce sound and healthy teeth, articles should be selected for food which contain silex and lime in sufficient quantity, such as unbolted wheat flour, meats, milk, &c., avoiding all excess of fats, sugar, and starch.

Another cause of the decay and destruction of teeth, which is overlooked by many people, is the irregularity of temperature to which they are subjected. People sip hot coffee and eat ice cream, little thinking of the sudden transition of temperature — sometimes from seventy-five to a hundred degrees of change — which the teeth are forced to undergo. Such a practice not only tends to weaken their power of endurance, to crack and destroy them, but is a prolific source of neuralgia, toothache, &c. When once the enamel becomes cracked or injured, the tooth is rapidly destroyed from the entrance of air, water, and other substances.

The teeth, whatever their condition, should be thoroughly cleansed after each meal, and the tartar and all particles of food lodged between them removed, as in a temperature so high as that of the mouth decomposition is rapid. It is well also to brush the teeth

before retiring, as perishable substances exposed to so high a temperature during the hours of sleep cannot but be deleterious. In regard to preparations for cleaning the teeth, it must be remembered that only such articles as have no destructive effect upon the enamel should be used. Simple cold water, castile soap and water, or salt and water, is sufficient in ordinary cases, but preparations of chalk or bark are not objectionable. Charcoal should be used rarely, as from the spiculated character of its particles it tends to injure the enamel. If tartar has already been deposited upon the teeth so that the brush fails to displace it, it should be immediately removed and the teeth thoroughly cleansed, when attention to the foregoing rules will effectually prevent its return. A tooth sometimes becomes very painful from cold, or an exposure of the nerve to the atmosphere. A pledget of cotton moistened with oil of capsicum or oil of clove, will immediately relieve the suffering. A drop of chloroform will often answer the same purpose.

Children while teething are often subject to great pain and inflammation, which is sometimes followed by fever or convulsions. In such cases it may become necessary to lance the gums to assist the passage of the teeth, and relieve the nervous tension and consequent train of symptoms. It is better, however, if possible, to obviate this necessity, and afford relief by gentler means. The head may be bathed with diluted spirits, and the feet with hot mustard water. The bowels should be kept free and regular by mild laxatives, and in extreme cases a mustard plaster may be placed between the shoulders. This treatment will usually mitigate the pain and obviate all danger.

As teeth are so essential to a proper performance

of the functions of digestion, every one should be provided with at least a serviceable set. Persons whose natural teeth are so far decayed and destroyed as to prevent the proper mastication of food, should have them removed and artificial ones substituted. Dentistry has made rapid strides during the past few years in the perfection of its art, and artificial teeth are made wonderful in their imitation of Nature, and capable of fulfilling nearly all the functions and answering all the purposes of the natural teeth. But partially decayed teeth may be made durable by filling, and when they can be thus saved, they are preferable to artificial teeth. It is advisable, as a matter of prudence, to consult the dentist and have the teeth examined from time to time, as by such a course teeth may be saved, that by neglect might soon be beyond the skill of dentistry.

CHAPTER XVIII.

USE OF THE NOSTRILS.

PEOPLE should more fully understand that the nostrils were made to breathe through, and that their delicate and fibrous lining is necessary to remove dust and other foreign substances, to purify and warm the air in its passage, and to stand guard over the lungs, especially during the hours of repose; and that by conforming in this respect to the designs of the Creator, many infectious fevers and other fatal diseases may be avoided, and pulmonary complaints lose much of their fatality. The atmosphere is nowhere pure enough for man's breathing until it has passed this mysterious refining process; and, therefore, the imprudence and danger of admitting it in an unnatural way upon the lungs, and charged with the surrounding epidemic or contagious infections of the moment. Especially is this true during the hours of repose, and he who sleeps with his mouth open not only has disturbed sleep, but lets the enemy in that dries up the saliva of the mouth, spoils the teeth, diseases the throat and lungs, irritates the nerves, and racks the brain. Such are the immediate results of this unnatural habit, and its continued and more remote effects, are consumption of the lungs and death.

Breathing of pure air has generally been conceded to be necessary to health; but the manner of breath-

ing it has not received the attention its importance demands. Physicians have invented and recommended the use of respirators to protect weak and diseased lungs, and they may have possessed some merit. But the nostrils were undoubtedly made for breathing, and the delicate and fibrous lining for purifying the air in its passage to the lungs; and we believe the natural protection better than any artificial which ever was or can be invented.

The air which enters the lungs is as different from that which enters the nostrils as distilled water is different from the water in an ordinary cistern or a frog-pond. The arresting and purifying process of the nose upon the atmosphere, with its poisonous ingredients passing through it, though less perceptible, is not less distinct nor less important than that of the mouth, which stops cherry stones and fish bones from entering the stomach.

The impurities which are arrested by this intricate organization of the nose are thrown out again from its interior barriers by the returning breath. When the delicate tissue becomes inflamed, or has been partially broken down by the use of snuff, by catarrh, or by repeated colds, so as to allow such impurities to pass, the extreme sensitiveness of the membrane beneath produces that muscular involution of sneezing, by which they are resisted and violently thrown back.

When this structure has been destroyed by chronic catarrh, or other causes, the natural safeguard to the lungs is gone, and the air is allowed to pass the nostrils without its proper purification, and hence chronic catarrh is often followed by consumption of the lungs. This fact, though entirely overlooked by physicians

generally, is of the utmost importance in the treatment of diseases of the head, throat, and lungs.

This intricate organization in the structure of man, unaccountable as it is, seems in a measure divested of mystery when we find the same phenomena in the physical conformation of the lower order of animals; and we are again more astonished when we see the mysterious sensitiveness of that organ instinctively and instantaneously separating the gases, as well as arresting and rejecting the material impurities of the atmosphere.

It is a known fact that man can inhale through his nose, for a certain time, mephitic air, in the bottom of a well, without serious harm; but if he opens his mouth to answer a question, or calls for help, in that position his lungs are closed, and he expires. Most animals are able to inhale the same for a considerable time without destruction to life, and, no doubt, solely from the fact that their respiration is through the nostrils, in which the poisonous effluvia are arrested.

There are many mineral and vegetable poisons also which can be inhaled by the nose without harm, but if taken through the mouth destroy life. And so with poisonous reptiles and poisonous animals. The man who kills the rattlesnake, or the copperhead, and stands alone over it, keeps his mouth shut, and receives no harm; but if he has companions with him, with whom he is conversing over the carcasses of these reptiles, he inhales the poisonous effluvia through the mouth, and becomes deadly sick, and, in some instances, death ensues.

Infinitesimal insects, not visible to the naked eye, are inhabiting every breath of air we breathe; and minute particles of vegetable substances, as well as

of poisonous minerals and silex, which float imperceptibly in the air, are, in diseased conditions of the nostrils, often discovered coating the respiratory organs of man; and the class of birds which catch their food in the air, with open mouths as they fly, receive these things in quantities, even in the hollow of their bones, where they are carried and lodged by the currents of air, and detected by microscopic investigation.

Against the approach of these things to the lungs, and to the eye, Nature has guarded by the mucous and organic arrangements, calculated to arrest their progress. Were it not for the liquid in the eye, arresting and neutralizing poisonous emanations, and carrying out the particles of dust communicated through the atmosphere, man would soon become blind; and but for the mucus in his nostrils, absorbing and carrying off the poisonous particles and effluvia for the protection of the lungs and the brain, mental derangement, consumption of the lungs, and death would ensue.

How easy, and how reasonable, it is to suppose, then, that the inhalation of such things into the lungs through the expanded mouth and throat may be one of the great causes of consumption and other fatal diseases attaching to the respiratory organs; and how fair a supposition, also, that the deaths from dreadful epidemics—such as cholera, yellow fever, and other pestilences—are caused by the inhalation of animalcules in the infected districts? and that the victims of those diseases are those people who inhale the greatest quantities of those poisons into the lungs?

In man's waking hours, when his limbs, and muscles, and mind are all in action, there may be but little harm in inhaling through the mouth, if he be in a

healthy atmosphere ; and at moments of violent action and excitement it may be necessary. But when he lies down at night to rest from the fatigues of the day, and yields his system and all his energies to the repose of sleep, and his volition and all his powers of resistance are giving way to its quieting influence, if he opens his mouth, he lets the enemy in that tends to chill his lungs, to rack his brain, to spoil his teeth, to paralyze his stomach, and derange the whole system ; and, during the following day, headache, toothache, rheumatism, dyspepsia, and the gout.

Such a man knows not the extent of the pleasure of sleep ; he rises in the morning fatigued, takes remedies perhaps through the day, and renews his disease at night. Destructive irritation of the nervous system and inflammation of the lungs, with their consequences, are the immediate results of this unnatural habit.

The lungs and the stomach are too near neighbors not to be mutually affected by abuses offered to the one or the other. They both have their natural food, and the natural and appropriate means prepared by which it is to be received.

The stomach performs its indispensable, but secondary part, whilst the motive power is in healthy action, and no longer. Man can exist several days without food, but only about as many minutes without the action of the lungs. Men habitually say "they don't sleep well, because something is wrong in their stomachs," when the truth may be, that their stomachs are wrong because something is wrong in their sleep.

If this dependent affinity in the human system be true, besetting man's life with so many dangers flowing from the abuse of his lungs, with the fact that the

brute creations are exempt from all of these dangers, and the Indians in the wilderness nearly so, how important is the question which it raises whether the frightful and unaccountable bills of mortality amongst the civilized races of mankind are not greatly augmented, if not chiefly caused, by this error of life, beginning in the cradle, and becoming by habit a second nature, to weary and torment mankind to their graves?

Man is created, we are told, to live threescore and ten years, but how small a proportion of mankind reach that age! We learn from official reports, that in civilized communities, one half or more perish in infancy or childhood, and one half of the remainder between that and the age of twenty-five, and physicians tell us the diseases they died of; but who tells us of the *causes* of those diseases? All effects have their causes, — *disease* is the cause of death, — but what is the cause of *disease*? This question and its answer are of infinite more importance in the solution of the problem of health than simply curing disease.

An Indian warrior sleeps, and hunts, and smiles with his mouth shut; and with seeming reluctance opens it even to eat or to speak. An Indian child is not allowed to sleep with its mouth open, from the very first sleep of its existence; the consequence of which is, that, while the teeth are forming, they take their relative, natural positions, and form that healthful and pleasing regularity which has secured to the American Indians, as a race, perhaps the most beautiful mouths in the world.

The Indian mother, instead of embracing her infant in her sleeping hours, in the heated exhalation of her body, places it at arm's length from her, and compels

it to breathe the fresh air, the coldness of which generally prompts it to shut the mouth; in default of which, she presses the lips together, until she fixes the habit which is to last it through life; and the contrast to this, which is too often practised by mothers in the civilized world, in the mistaken belief that extra warmth is the essential thing for their darling babes, is, no doubt, the innocent foundation of the principal, and as yet unexplained, cause of the deadly diseases so frightfully swelling the bills of mortality in civilized communities.

Under the less cruel, and apparently more tender and affectionate, treatment of many civilized mothers, their infants sleep in their arms, in their heated exhalation, or in cradles, in over-heated rooms, with their faces covered, without the allowance of a breath of vital air; where, as has been said, they from necessity gasp for breath until it becomes a habit of their infancy and childhood to sleep with their mouths wide open, which their tender mothers overlook, or are not cruel enough to correct, little thinking that the habit is to result in the destruction of the child's teeth while in their forming stage, or of the sad affliction which the croup, or other diseases of the throat and lungs induced by this habit, is to bring to their household.

When we see the brute creation nearly exempted from premature death, and the Indian races comparatively so, while civilized communities show such lamentable bills of mortality, it is but a rational deduction that such fatality is the result of habits not practised by Indians and the brute creation; and what other characteristic differences in the habits of the three creations strike us as so distinctly different, and so proportioned to the results, as already shown; the

brute, with the mouth always shut, the Indian, with it shut during the night and most of the day, while many among the civilized races keep it open most of the day and all of the night? The first of these is nearly free from disease; the second, comparatively so, and the third shows the lamentable results in the bills of mortality.

How forcible and natural is the deduction from these facts, that here may be the principal cause of such widely different results, strengthened by the other facts, that the greater part of the fatal diseases of the body, as well as diseases of the mind, before mentioned, are such as could and would flow from such an unnatural abuse of the lungs, the fountain and mainspring of life! and how important, also, is the question raised by these facts, how far such an unnatural habit exposes the human race to the dangers from epidemic diseases!

Epidemic diseases are undoubtedly communicated through the medium of the atmosphere, in poisonous animalcules or infectious agents, and what conclusion can be more rational than that he who sleeps with his mouth open during the night, drawing an increased quantity of infected atmosphere directly on the lungs, will increase his chances of contracting the disease? And how interesting to science, and infinitely important to the welfare of the human race, might yet be the inquiry, whether the thousands and millions of victims to cholera and yellow fever, were not those very portions of society who were in the habit of conversing freely during the day, and sleeping with their mouths open during the night, in the districts infected with those awful scourges!

If physicians and surgeons gain fame for occasionally conquering the enemy in *combat*, what laurels, and what new title should await the fair diplomatists who will *keep the enemy out of the field* — the affectionate mothers, who sit by their sleeping infants, and watch and guard them through their childhood against the departure from one of Nature's most wise and important regulations, designed for their health and happiness?

If the greater portion of this species of evil has its origin in that early period of life, its correction comes directly under the mother's province; and there certainly can be no better guarantee for the benefit of coming generations than that mothers should be made fully sensible of the evil, and of their own power to avert it. And to mothers we would say, breathe pure air through the nostrils, and give to yourselves and your offspring the full benefit of the peaceful and invigorating repose which Nature has prepared for all; and in the care of the darling objects of your tenderest affections, do not forget that Nature has prepared and designed them to breathe the fresh open air; and remember, that when they sleep in your embrace in close heated rooms and feather beds, with faces perhaps covered, forced to breathe, not only confined air, but exhalations from your own body, the consequences will be likely to break your hearts in after years. Rest assured that the great secret of life is the breathing principle, for which Nature has rightly prepared material, and the proper mode of using it; and, at the incipient stage of life, where mothers are the physicians, is the easiest time to contract habits against Nature, or to correct them. And

there is woman's appropriate sphere ; where she takes to herself the sweetest pleasures of her existence, and draws the highest admiration of the world, while, like a guardian angel, she is watching over, and giving direction to, the destinies of man.

CHAPTER XIX.

THE SKIN.

THE skin consists of two layers of membrane—the cuticle, or external membrane, and the cutis vera, or true skin. The cuticle, or outer membrane, varies in thickness from the thin covering upon the internal flexions of the joints, to the thickened covering on the palms of the hands and soles of the feet. It is without nerves or blood-vessels; while the under skin contains minute arteries, veins, and nerves in great numbers; lymphatic vessels, too minute to be seen with the naked eye, but forming a part of the vascular net-work lying upon the surface of the inner skin, and connecting with larger lymphatic trunks which communicate with the venous system; and oil-glands imbedded in the lower skin, and communicating with the surface by small tubes which traverse the cuticle. The perspiratory apparatus consists of minute tubes passing inward through the cuticle, in spiral, coil-like shape, down into the deeper meshes of the cutis vera, where the tubes form globular balls, called perspiratory glands. The openings of the perspiratory tubes upon the surface of the skin are called pores. A celebrated anatomist says that, in order to arrive at something like an estimate of the value of the perspiratory system, in relation to the rest of the organism, he counted the

pores on the palm of the hand, and found three thousand five hundred and twenty-eight in a square inch, each of these being the aperture of a small tube. The number of pores on the surface of a man's body will be seven millions, allowing the surface of a man of ordinary size to be two thousand five hundred inches. The use of these perspiratory glands is to separate the waste matter from the blood, and carry it off through the skin in the form of vapor. Sanctorius for thirty years weighed himself, his food, and excretions, and found that five eighths of all the broken-down tissue and excretory matter passed off through the pores of the skin.

Perspiration is of two kinds, — sensible and insensible, — the difference between them consisting only in the degree with which it passes off. Insensible perspiration is always emanating from the body when in a healthy state, from the first breath of infancy to the last of old age. But sensible perspiration is only occasional, as during excessive heat, or active muscular exercise. Checking perspiration, or, in other words, allowing the skin to become inactive, is always attended with more or less harm to the constitution. True, in some cases, the bowels, kidneys, lungs, &c., may prove sufficient for the emergency, in throwing off the perspirable matter that should have passed out at the pores; but in other cases serious disease is the result. A sudden check of the normal action of the skin is always attended with danger.

A merchant, in "lending a hand" on board one of his ships on a windy day, found himself, at the end of an hour and a half, pretty well exhausted, and perspiring freely. He sat down to rest. The cool wind from the sea was delightful; and, engaging in conver-

sation, time passed faster than he was aware. In attempting to rise, he found he was unable to do so without assistance. He was taken home and put to bed, where he remained for two years, and for a long time afterwards could only hobble about with the aid of a crutch.

Less exposures than this have, in constitutions not so vigorous, resulted in inflammation of the lungs, — “pneumonia,” — ending in death in less than a week, or causing tedious rheumatism, to be a source of torture for a lifetime.

Multitudes of lives would be saved every year, and an incalculable amount of human suffering would be prevented, if parents would begin to explain to their children, at the age of three or four years, the danger which attends cooling off too quickly after exercise, and the often fatal results of standing still after work, or of remaining exposed to a wind, or of sitting at an open window or door, or of pulling off any garment, even the hat or bonnet, while in a heated condition.

It should be remembered by all that a cold never comes without a cause, and that, in a large proportion of cases, it is the result of leaving off exercise too suddenly, or of remaining still in the wind, or in a cooler atmosphere than that in which the exercise has been taken.

It often happens that the skin loses its activity, and after a time the condition becomes chronic, the perspiratory function being rendered inactive, although not completely checked.

Every farmer knows full well how harmful it is for animals to become “hide-bound ;” and if such a condition of things is allowed to go on for any considerable time, the animal is very liable to droop and die.

Now, the truth is, a very large proportion of mankind are "hide-bound," and have a skin so inactive that, without a removal of this evil, they cannot, by any means whatsoever, enjoy good and enduring health. Whenever a person, male or female, cannot readily, by suitable exercise, excite a visible perspiration, they may be assured that their systems are in a state far removed from real health, and that if they neglect these symptoms they are liable constantly to become more and more ill.

BATHING.

We have seen how important a part the skin performs in the economy of the system; and, in view of this fact, the reader will be impressed with the importance of scrupulous attention to cleanliness. The cuticle is constantly being cast off in minute scales, many of which are retained upon the surface of the skin by perspiration and pressure of the clothing. These form a coating, and obstruct free perspiration. If this coating remains, it becomes thick and established upon the skin; perspiration will be impeded, and the influence of the skin as an excretory organ nearly prevented. The functions of the skin being at fault, its duties must be performed by other organs, through the lungs, kidneys, liver, and intestines, which, being overtasked, the healthy equilibrium is destroyed, and these organs become diseased. Anatomists are unanimous in pronouncing habits of uncleanness and neglect of the skin a primary cause of consumption and other serious diseases of the vital organs, while the retained dead and cast-off matter

upon the surface of the skin will cause cutaneous eruptions, and diseases will be produced by the reabsorption of the matter once separated from the system.

Bathing, with the judicious use of sponge, soap, and coarse towels, is a powerful agent to restore, preserve, and promote health. To all in the enjoyment of ordinary health, the frequent use of the cold, temperate, tepid, or warm bath — taken in the form of a sponge, shower, or plunge bath, as the vitality of the system will endure, or the taste or feelings of the recipient may prefer, accompanied with the free use of soap and towels — is of great value; and with a due regard to air, exercise, and diet, will promote the health and happiness of the human family, lengthen the period of life, and secure vigor and elasticity of body to a good old age.

Bathing, like any other good thing, is liable to abuse. Every year, when the hot weather sets in, great numbers of young men and boys indulge quite too freely in cold bathing. It is not prudent for persons of low vitality or scrofulous constitution to go into the water; but if they should insist upon the practice, they should never remain in longer than is absolutely necessary to cleanse the surface. No person, however vigorous, should remain in a cold bath longer than fifteen or twenty minutes; and five minutes is safer, and gives ample time to cleanse the skin. And yet it is not unfrequent that boys remain in the water from thirty minutes to two or three hours, enjoying what they regard as a good time. But this practice has ruined the constitution, and sent to a premature grave many a promising youth.

We cannot close this article without entering our

protest against such an abuse ; and we call upon parents and guardians to give those under their charge such instruction in regard to the necessity of cleanliness, and the laws which govern their physical constitution, that they may receive the benefit of bathing without hazarding their lives in this reckless manner.

CHAPTER XX.

THE BLOOD.

AN accurate knowledge of the constitution and properties of the blood is necessary for thoroughly understanding many of the diseases which afflict the human race. This fluid is emphatically the life of all flesh; and through its instrumentality the ceaseless changes in our bodies are effected, and the different organs and tissues nourished.

During exercise the tissues waste; in repose the waste is supplied. That the "lamp of life" may burn brightly, the material for healthy action must be supplied. Hence it is absolutely necessary that we breathe, eat, drink, and sleep to maintain the integrity of the system, and to supply the vital fluids by which nutriment is carried to the various tissues, and life is sustained.

The blood in circulation is not a homogeneous fluid, but is found, by microscopic examination, to consist of a nearly colorless, transparent, alkaline fluid, termed plasma, in which are contained numerous globules. The globules, though not visible to the eye, compose, in their natural, semi-fluid condition, about one half of the entire mass of the blood. They are aptly termed carriers of oxygen. Obtaining oxygen in the pulmonary circulation, they transfer it to

the tissues which they pervade, and are then returned to the air-cells for a fresh supply. The plasma contains the material from which the soft and muscular tissues are nourished, renovated, and repaired.

As life is only to be preserved, and the integrity of the system maintained, by the circulation of the blood, so, in proportion as the blood is pure, healthy, and well supplied with the nutritive principle, will the body be strong and active.

The blood receives material from the atmospheric air through the lungs, and from the primary digestion which takes place in the alimentary canal; in return, it affords material for forming the secretions and building up the tissues. As disease or death may arise from the absence of certain elements which are indispensable to the healthy nutrition of the organs, so they may also ensue from the retention or introduction of injurious substances into the blood. Hence the necessity of the process of excretion, by which the tissues which have served their purpose, and become broken-down, and all effete materials, are discharged from the economy.

DISEASES OF THE BLOOD. — There is no class of diseases upon which medical men have differed so much as upon those affecting the blood. The real nature of these maladies seems to have escaped the notice of most physicians, while others, in the pride of their *learned ignorance*, have declared that no such diseases exist.

But, notwithstanding such contradictory opinions among physicians, affections of the blood have, for the last few years, developed with a rapidity unparalleled in the annals of disease, and are the cause of much suffering and ill health. And in the present genera-

tion diseases of the circulating fluids have left their blighting influence upon so many constitutions, and their effects have become so mingled with the very elements of existence, as to aggravate and render more complicated and difficult to cure not only chronic, but also the greater part of the acute, diseases to which the human body is liable.

Humors and morbid material in the blood are the direct cause of cancers, scrofulous swellings or foul ulcers, and eruptions of the skin. Before such diseases, or any chronic difficulty, can be developed locally, there must have been pre-existent in the blood a material of low organization, which the excretions have failed to eliminate from the system. This condition may have been the result of acute disease badly treated, or scrofula, or other constitutional taint. Hence the development of catarrh, consumption, bronchitis, dyspepsia, liver complaint, and many other difficulties.

The reader will readily see that this class of ailments can never be permanently cured by any treatment except that which will purify and make healthy this vital fluid. The ordinary practice for acute disease can, therefore, at best afford only temporary relief. Not only so, but common observation and experience fully justifies the belief that in many instances the original difficulties are greatly aggravated. The real cause can never be reached by local applications; hence such treatment must ever remain a failure on the pages of medical history. Our only hope of success, then, lies in clearing the secretions, cleansing the circulating fluids, and eradicating the cause of the disease from the system. The principle upon which a cure may be effected is found in changing the secre-

tions from a diseased to a healthy condition, so that the system can digest, assimilate, and manufacture good, pure blood; and at the same time, by proper remedies acting upon the excretions, throw off all diseased material, which, if allowed to remain, will clog the avenues of life. By persevering in this course of treatment, the system is soon reproduced, and in this reproduction the disease, with all predisposition to it, is left out. This is Nature's mode of cure; and we know of no other means that can offer a reasonable hope of success.

CHAPTER XXI.

MISCELLANEOUS.

COLDS.

It is important always to keep as free from colds as possible. Dress warm, and avoid, as much as your business will permit, all sudden exposures to a cold or damp atmosphere. Colds in summer are more liable to be followed by serious consequences than in winter; but a cold at any season of the year is productive of much evil, and should never be neglected. The pores of the skin are necessarily more or less open at all times, and a great amount of impure and diseased matter is thus thrown from the system by the millions of outlets with which the skin is supplied. Colds arrest this action, and hence become dangerous. A sudden cold or chill, in passing into a damp or cold atmosphere while in a state of perspiration, is at any time dangerous, unless the body is well protected with suitable clothing. One great cause of mortality among children may be traced directly to the want of proper clothing to protect their bodies and limbs from the inclemency of the weather. But with a certain class of our citizens the fashions must be followed, though the little cherubs pay the forfeiture with their lives, while the parents console themselves with the reflection that it is an inscrutable Providence which has

called them away. These remarks apply equally well to many young ladies, who are in the habit of going out of well-warmed rooms into the street, in cold or damp weather, thinly clad. Operatives in shops and over-heated factories, going out for their meals, when fatigued with the labors of the day, often take cold, and become victims to various derangements of the system, which, if neglected, are productive of ill health and premature death.

The causes of colds are so numerous that no rule can be laid down to avoid them, other than to dress comfortably, and with due attention to the state of the weather, the condition of the body, and the places where you are to go. Every person should use judgment and good sense in this respect. If you find at any time that you have taken a violent cold, immediately place yourself in a warm room, and take warm herb teas, if you can get nothing better, to produce a free perspiration; keep in a warm room free from exposure, and the cold will soon disappear, without any serious derangement to the system. This is the only safe course to be pursued. People do not always feel that they can give up for a cold, and keep about their business, and finally, perhaps, wear it off. But it is at a risk of serious injury to the constitution, if not fatal disease.

One great cause of colds arises from damp or wet feet. Ladies, especially, who wear thin boots, readily take cold from simply walking on damp ground, and afterwards neglecting to dry their feet. Persons should never remain with their feet wet, but the stockings and boots should be exchanged for dry ones at the earliest possible moment.

The feet sometimes become cold, without being ac-

tually wet, and if allowed to remain in this condition, diseases of the kidneys, lungs, throat, and head are liable to follow. The feet must be kept warm at all times, if perfect health would be enjoyed.

Another prolific cause of colds and general ill health is a damp, clammy condition of the feet. This is especially noticeable in nervous and excitable people. This condition is not, as many suppose, the result of natural perspiration, as shown by the fact that the secretion is arrested by heat and increased by cold. It is rather the result of great nervous excitement, in which, by the excessive action of the brain and nervous system, the vitality of the whole body has become exhausted, leaving the feet in this cold, death-like condition. Loss of sleep, by exhausting the powers of the brain and nerves, often produces a similar result.

People who go through great mental exertion are subject to this condition, and consequently predisposed to colds; and if, after a day of severe brain-work, the feet are felt to be damp and clammy, the stockings and boots should be changed at once. To remedy this, the feet must be kept warm. If woollen stockings and brisk rubbing are insufficient, artificial warmth should be employed.

Persons who, by excessive work of the brain, have brought on this condition, should be admonished of their danger, and made to realize that they are living at a rate which is liable at any time to make a wreck of their whole constitution. (See articles on "Sleep" and "Brain-Work.")

There are other sources whence colds are derived, which will readily suggest themselves to the reader. But there is one cause which is so prevalent and so

fatal that we cannot let it pass without a word of warning. In households, "spare rooms" are generally set aside from daily use, and devoted to the school-master, the itinerant minister, or the visitors who may chance to come. From economy, these rooms are usually kept unwarmed, often unaired, and the clothing of the bed, because unused, is rarely changed. In such rooms the dampness is often excessive, and the bed becomes, in time, saturated with moisture. The dampness of such a bed is sufficient to overcome the animal heat of any person, and the results of sleeping under such conditions are colds, catarrh, or diseases of the throat and lungs, often resulting in death.

A fire is sometimes built for a few hours, but it would require days of warmth to dry up the accumulated moisture.

All should remember that rooms from which the air and sunlight are excluded accumulate elements that engender disease and death. We doubt not that many a noble man has been disabled and lost his life by the unhealthy condition of the room in which he passed the night, proffered through the intended kindness of his host.



STAMMERING.

This affection, though not fatal, is often very troublesome. It is caused by a spasmodic action of the vocal organs. The treatment necessary for the cure of this difficulty will be effectual in every case where there is no organic defect in the vocal organs; and

where it fails, we may be assured that it is in consequence of a want of proper attention on the part of the patient.

The secret of cure consists in following two simple rules. First, the stammerer must never attempt to speak while he is inhaling his breath, or when it is nearly exhausted. Before attempting to speak he should inflate the lungs, and be sure he has breath enough to speak distinctly the words or sentence he wishes to utter. This rule, if enforced, is in itself sufficient in most cases to remove the impediment.

It will be observed that stammering persons never find any difficulty in singing. The reason of this is, that by observing the measure of the music, by keeping time, the organs of speech are kept in such position that enunciation is easy. Apply the same rule to reading or speech, and the same result will follow. Let the stammerer commence by reading simple compositions, like the Psalms of David, or a single sentence, "Praise waiteth for thee, O God, in Zion," keeping time with the fingers, if necessary, letting each syllable or word occupy the same length of time, and he will not stammer. Let him pronounce slowly at first, then faster, but keeping time, and he will be surprised to find that, by a very little practice, he will read without stammering, and nearly as rapidly as persons ordinarily talk or read. Then practise this reading and conversation until the habit is broken up. Perseverance is all that is necessary to effect a perfect cure.

FEAR OF DISEASE.

Much unnecessary alarm exists in every community in regard to many diseases. We are, it is true, all liable to sickness and death. But if we are sober, cleanly, and brave of heart, we need have no fear of disease of body or mind.

As the co-operation of the mind is important in curing disease, so in contracting it the influence of the mind is inconceivable. The peculiar and intimate relations which exist between the mind and body render it impossible to affect the one, either for good or evil, without causing a reciprocal effect upon the other. A person whose mind is disturbed with fear, with a morbid dread of contracting disease, is far more likely to be attacked than he who fearlessly goes about his duty. The reason is obvious. The mind, intimidated by fear, communicates its weakness to the body, which is thereby thrown off its guard, and laid open to the invasion of disease. On the other hand, the person who has no such fear, provided his system is in a healthy condition, has, in the resisting powers of Nature, a potent safeguard against epidemic disease.

It has often been noticed that during the prevalence of pestilential diseases, physicians, undertakers, nurses, and grave-diggers, whose business compelled constant liability to infection, have usually escaped in a far greater ratio than their numbers would warrant. The "charm" of this immunity from the prevailing scourge is very simple. They are not scared. They are *positive* to the disease, and hence repel its attacks. Fear is a great ally of death. Whoever is afraid of disease is in a *negative* condition, and really invites its approach.

When the cholera was devastating Europe in 1821-2, the papers of the day chronicled a casual meeting of Death and his devastating agent, who had just finished scourging Naples. "How many have you killed in Naples?" asked the grim King of Terrors. "Five thousand," replied Cholera. "Five thousand!" exclaimed Death, in a violent rage. "Why, I have heard it was twenty thousand."

"True, your Majesty; but I despatched only five thousand. Fear killed the rest." And thus it is the world over. The brave die but once, while cowards die many times.

SLEEPING ALONE.

It is well known that in our breath there are exhalations of carbonic acid gas and other impurities, which, if retained in the system, would be destructive to life; and that if a person be confined in a small, close room, the breath and exhalations from the body soon render the air impure. The atmosphere is also contaminated by emanations of dead, effete matter, which are constantly being thrown out by the processes of Nature, and which render it necessary to keep our rooms constantly ventilated.

Taking the breath of another the moment it leaves the nostrils is injurious. The breath that mingles with the air about the bed in which two persons lie is re-breathed, but it is less pernicious only in proportion as it is mixed with atmospheric air.

One person corrupts the atmosphere of the room by his own breathing, but when two persons are breathing at the same time fifteen or sixteen times in each

minute, each minute extracting the nutriment from a gallon of air, the deterioration becomes very rapid, especially in a small and close room. A canary bird, hung up in a curtained bedstead where two persons slept, died before morning.

Infants are sometimes found dead in bed, and it is attributed to having been overlain by the parents; but the idea that any person could lie for a moment on an infant without knowing it is absurd. Such deaths are caused by suffocation from the want of pure air.

The most destructive typhoid and putrid fevers are known to arise directly from a number of persons living in the same small room.

Those that can afford it should therefore arrange to have each member of the family sleep in a separate bed. If persons must sleep in the same bed, they should be about the same age, and in good health. If the health be much unequal, both will suffer, but the healthier one the more.

So many cases are mentioned in standard medical works where healthy, robust infants and larger children have dwindled away, and died in a few months, from sleeping with grandparents or other old persons, that it is useless to cite special instances in proof.

It would be a constitutional and moral good for married persons to sleep in separate beds or adjoining rooms, as a general habit. It would be a means of physical invigoration, and of advantages in other directions, which will readily occur to the reflective reader. It is the bodily emanations collecting and concentrating under the same cover which are more destructive of health than the simple contamination of an atmosphere breathed in common.

THE BEARD.

Physiologists generally agree in the fact that every portion of the body bears some sympathetic relation to the brain, or its function, the mind. This would argue that if man wishes to preserve all his native vigor, both of mind and body, and be godlike in all his designs and aspirations, with a full capacity to appreciate and comprehend the universe of appreciable things, he must be "perfect, entire, and wanting nothing." Wearing the beard was as common to the ancients as wearing the hair; and if men were disfigured by being shorn, as a punishment, it was considered a disgrace, and their effeminate appearance humiliated them, and kept them from society until the beard had grown again.

Beards are also indications of character. Men of great precision and nicety of taste, who are somewhat aristocratic in their manner, brush their beard forward; others, more democratic, brush theirs downward. Some train the mustache one way, and some another, according to their own peculiar tastes. A person who has never shaved has a soft, beautiful, flowing beard and mustache, which can be dressed to suit the taste or fastidiousness of the wearer. It is said that the habit of shaving was introduced into England by a young English king, who was too young and effeminate to raise a beard; and that the practice soon became so universal, that if a preacher or school-teacher wore a beard, he was made a subject of ridicule.

The beard on the face of man was designed to serve important ends.

Like the hair of the head, it is hollow, and the bulbous root of every hair joined to a nerve of the face. Into the orifice of each hair constituting the beard the connected nerve discharges a portion of its own vital fluid, which retains its fluid state fully to the surface of the skin, and by its support keeps the beard soft and healthy. When the face is closely shaven, thousands of openings are made, through which flow out as many streams of nervous fluid. It is estimated that the man who shaves three times a week, wastes thirty times the amount of vital fluid required to sustain an unshaven beard. This outflow continues after each process of shaving till the fluid spreading forms a coating, which causes the flow to cease. The waste thus made is a draft upon the entire nervous system, as much so as the oozing of blood would be a drain upon the vitality of the body.

Not only are the fountains of life thus invaded by the razor, but also the natural covering of the face is removed, subjecting the delicate termini of the facial nerves exposed to sudden transitions of temperature, often much to the detriment of the health. Let a person thus shaven go out in a cold day, and he will experience a painful sensitiveness to the cold of the part so uncovered, while myriads of doors are open, inviting disease to enter, and the nerves are so many telegraph wires to bear the tidings through every part of the frame. Is it, then, marvellous that men living as they do, daily or tri-weekly renewing the barbarous practice of shaving, even though there were no other injurious effects, find the stream of life running nearly or quite to exhaustion?

That the beard of the upper lip is of great service to the eyes and lungs, we have most conclusive proof.

Whoever has put a dull razor to the beard on that part of the face, starts tears from the eyes, thus demonstrating the immediate nervous connection between that part of the beard and the eyes. Also, shaving the lower lip and chin has a tendency to develop and aggravate diseases of the lungs and other constitutional disturbances. A preacher of the gospel, who had for years kept a clean-shaven face, was troubled by partial loss of sight and a general prostration of health. He ceased shaving, and in a few months his eyesight was restored, and he regained his usual health. We might refer to numerous instances where the eyesight and general health has been very much improved by ceasing to shave.

Moreover, the beard stands sentinel at the chief gateway to the lungs, to arrest dust, and other injurious intruders, from entering this sacred temple of life.

A farmer, who raised large quantities of clover seed, once said to us that he had found that no man who shaved could work consecutively more than two days at cleaning clover seed, while those with full beards could continue such work week after week. Persons working at needle-grinding, stone-cutting, or any dusty work, are protected by the mustache and beard from the large amount of irritating dust that was formerly inhaled by such laborers when they shaved; and, according to recent statistics, the mortality, formerly so large among that class of artisans, has sensibly diminished since the wearing of the beard has become more general. Consumption and disease of the air passages were not so common previous to the era of shaving; and let us hope that by ignoring the razor, man may yet recover his accustomed constitution,

and that some future generations may attain, if not the age of our fathers, at least a perfect development, both in body and mind.

PROFANITY.

Our readers may think that the habit of profane swearing has no immediate connection with the object of this book ; but any habit or practice that demoralizes the intellectual and moral faculties tends to destroy health and happiness, and is therefore intimately connected with the medical profession, and comes within the province of every true physician.

Of all bad habits, it would be difficult to name one that has less reason or provocation than that of using profane or vulgar language. When calmly viewed, the act of one human being calling violently on his Maker to deliver over his fellow-man to condemnation is wicked in the extreme. It is not only a vain and irreverent use of his Maker's name, but it is the expression of a hateful and infernal wish. It is not only wicked, but it is useless and irrational ; it brings no pleasure, comfort, or relief. No swearer is ever the wiser, richer, or happier for his curses. The language furnishes all the words and terms needed to give strength and vigor to expression without resorting to oaths. All the words needed to express indignation, and wrath, even, are found in it. An oath does not give strength nor emphasis to the truthful man's yea, and all the oaths and maledictions that can be imagined cannot give strength to the words of a liar. Swearing is chiefly a habit. The oath which the apparently well-bred man utters in a moment of

passion or vexation may be overlooked, for it is, perhaps, an accident; but for the foul volley of oaths and curses that the habitual swearer pours out in ordinary conversation, or on slight provocation, there is no shadow of excuse. They are a shame to himself, and a disgust to his acquaintances. Some men are such slaves of the vicious habit that they swear without knowing it; they converse in a dialect of oaths. They would be disgusted themselves if they could see one of their simple conversations in print, with coarse oaths bristling all along the line of their remarks. Profanity and vulgarity do not always go together, but they are twin sisters. The swearer is in danger of becoming vulgar, and the vulgar man is almost invariably a swearer. When both habits meet in the same individual, they make him intensely offensive to all pure-minded people.

It is imagined by some that an occasional oath or a little vulgarity gives spice and flavor to conversation; but if it does, it is a very offensive flavor. There is nothing more charming than chaste and simple language, and it is worth any man's while to cultivate the habit of using it. An oath would not be considered a flavor to the conversation of a modest and beautiful maiden; neither can it be justly held to add to the piquancy of the conversation of a man. There is as much connection between the words and the thoughts, as there is between the thoughts and the actions. The former are not only the expression of the latter, but they have a power to react upon the soul, and leave a stain of corruption there. A young man who allows himself to use one vulgar or profane word, has not only shown that there is a foul spot upon his mind, but by the utterance of that word he

extends the spot and inflames it, till, by indulgence, it will pollute and ruin the soul. Be careful of your words as well as your thoughts. If you can so control the tongue that no improper words are pronounced by it, you will soon be able also to control the mind, and save that from corruption. You extinguish the fire by smothering it, or by preventing bad thoughts bursting out into language. Never utter a word anywhere which you would be ashamed to speak in the presence of the most refined lady, or the most religious man. Words never come home empty; they yield some sort of revenue. Good words bring blessings; reproving words bring health to the soul; but bad words only return in curses, and stamp a man as fitted to commit other sins. Beware of profanity. It is not the "prayer of faith;" it is a prayer of cursing, debasing to yourself, demoralizing to all with whom you associate, and will most assuredly redound to your discomfort, your sorrow, and your disgrace.



ILL NATURE.

Men, women, or children, whatever their physical deformities may be, cannot be ill natured except from moral and intellectual causes, and therefore no one has a right to be ill natured, and if he is so, it is his fault or misdemeanor; and exercising a bad disposition, he cannot expect to receive the love of other people. No man can truly love an ill-natured woman; and if fathers and mothers can love cross, ill-humored children, it is a sore struggle, and may be duty, after all, not love.

To have lost one's nose or eye, to squint, or to have a hunchback, are certainly misfortunes — deterioration of the human form, and impairments of its high ideal ; but if all these calamities were centred in one unhappy person, they would not make him positively ugly, if he were wise, benevolent, just, and generous, and passed his life in deeds of kindness and charity.

Milton has not endowed his sublime fiend with the horns, dragon's tail, and other vulgar ugliness of popular superstition. He was too great a poet and philosopher to fall into such an error. The physical beauty of his Satan, in all the outward appearance, was originally as great as that of the angels who had not fallen ; the hideousness was in the mind, and the mind moulded the body to its own character, and Satan, though he was, as Sydney Smith said, a " fine fellow " in one sense, was terribly malicious in another, sublimely horrible, and infinitely more fearful to think of than the grotesque compound of satyr and dragon, whom we owe to the exuberant fancy and bad taste of the monks of the middle ages.

Ill-natured persons may have well-developed and regular features ; they may be tall and shapely as the Apollo Belvedere ; but the evil spirit that is in them sets the indescribable seal of a bad mind upon all their physical lineaments. We cannot disguise our faults if we would, and evil persons must bear the brand of criminality upon their foreheads as Cain did, and carry marks of divine displeasure stamped upon their faces, shaped in their aspect, toned in their voices, telegraphed into their looks and gestures. By these means they are pointed out to their fellow-creatures as having sinned against the moral government of the universe, so that all who see them may know them,

and take warning by their punishment. All that is morally bad is physically ugly; *ergo*, every man and woman may be beautiful if they will, and no man, woman, or child has a right to be ill-natured.

Wear a pleasant countenance, let joy beam in your eyes, and love dwell in your heart and glow in your face. There are few joys so great as that which springs from a kind act or a pleasant deed, and you may feel it at night when you rest, in the morning when you rise, and through the day when about your business.

Which will you do, then, smile, and make yourself and others happy, or be crabbed, and make everybody around you miserable? You can live, as it were, among beautiful flowers and singing birds, or in the mire, surrounded by fogs and frogs. The amount of happiness you can produce is incalculable, if you will show a smiling face and a kind heart, and speak kind and pleasant words. On the other hand, by sour looks, cross words, and a fretful disposition, you can make yourself and those about you wretched almost beyond endurance.



BORROWING TROUBLE.

Borrowing is a bad practice at best, but borrowing trouble is undoubtedly the most foolish investment a person can make. The habit which some indulge in of finding fault with everything which comes under their notice, moaning over some imaginary evil, however slight it may be, or fretting about this thing and that thing, is not only a great source of misery to

themselves, but also of annoyance to those who may chance to be so unfortunate as to be brought in contact with them. There are trials enough to contend with in life without creating imaginary troubles to brood over and add to our list of grievances. There are diseases and physical suffering enough in this world, without aggravating them by indulging in such morbid action of the mind. Every one should, of course, have sufficient forethought, and be prudent and considerate for the future, but not with the feverish anxiety which begets discomfort with our present lot, and renders us irritable and unhappy.

We may mourn over some past error, and from its wholesome experience learn to guard against a similar occurrence in the future ; but the idea of making ourselves miserable about that which the future may bring forth is injudicious, and the habit should not be indulged in any of the business or social relations of life. It is an excellent plan to postpone alarm until there is some sign of danger.

There are far too many who pass away their time worrying over trifling cares and troubles. They find no moments in which they can sit down in peace, and enjoy the pleasures of a quiet rest, but are ever surrounded, in their own minds, with innumerable pressing cares, with severe trials and burdensome duties. All looks dark and discouraging before them ; and by allowing their minds to be so occupied, their spirits become depressed, and, dissatisfied with everything around them, they render themselves miserable and unhappy.

But such a course is wrong, very wrong, and not only injures the public mind, but the public health. It can be easily avoided by beginning right, and guard-

ing against the habits which inevitably lead to such a state of existence. "Sufficient unto the day is the evil thereof," is a very true saying, and thousands there are who would do well to stop and reflect upon the truth thus proclaimed. Ask yourselves these very plain and simple questions: Am I not borrowing unnecessary trouble? Do I not add to the cares and perplexities of life, to my own discomfort and that of others, by constantly seeking for some such cause of complaint? Am I doing all that I can to make the present hour bright and happy, thus fortifying myself against real dangers, should they chance to come?

Never give way to doubts and uncertainties. Never seek to raise up unnecessary difficulties in the future, but calmly and firmly meet every obstacle that presents itself. Take care of the present, and then, if future storms of adversity rage around you, and misfortunes pour in upon every side, you will be better prepared to meet them, and thus come off victorious in the end.



COSMETICS.

To show the danger of using cosmetics, we need but state that arsenic, the acid nitrate of mercury, tartar emetic, cantharides, colchicum, and potassa caustica, form part of their ingredients. The various kinds of fancy soap are colored green by the sesquioxide of chromium, or of a rose color by the bi-sulphuret of mercury, known as vermilion. Some of the cheaper articles of soap have been found to contain thirty per cent. of insoluble matter, such as lime or plaster, while others contain animal nitrogen matter, which,

having escaped the process of saponification, emits a bad smell when its solution is left exposed to the air. The various toilet articles are so far noxious that, being applied to the skin still impregnated with soap and water, they give rise to a decomposition, in consequence of which the fatty acids of soaps, being insoluble in water, are not removed by washing, become rancid, and cause an irritation or chronic inflammation of the skin, which often becomes very troublesome. Many of the preparations employed for hair-dye contain nitrate of silver, sulphur, oxide and acetate of lead, sulphate of copper, and other noxious substances. All cosmetics for removing hairs or freckles are dangerous, as many of them contain corrosive sublimate and oxide of lead.

POISONS IN MANUFACTURED ARTICLES.

To such a great extent are poisons used in the manufacture of many of our common commodities that we think it necessary to warn our readers. Not only do articles for eating, such as table sirup, pickles, and candies, contain poisons, but many articles of apparel, as gloves, calicoes, and muslins, are colored by preparations of arsenic and other poisons. Many of these fabrics contain two or three grammes of arsenical acid per yard. This is especially the case with printed calicoes and muslins presenting white designs on a violet ground, or calicoes with yellowish brown or brownish red patterns, shades which the uninitiated buy without suspecting the danger incurred in wearing them. The arsenic is not in an indissoluble com-

bination, for on the fabrics being placed in water for a few seconds they give off a considerable quantity of it. These productions are generally sold at a low price, and are consequently within the means of all.

Many different shades of kid gloves are colored with arsenic, especially the bright green; and young ladies who are strangely troubled with sore fingers often owe their affliction to wearing such gloves. Many cases of sore eyes and nose also result from touching those organs with the gloved fingers.

Wall papers, with their beautiful green figures, owe their brilliant coloring to preparations of arsenic. The air of an apartment thus papered becomes poisoned by absorbing the volatile principle of the arsenic, and persons breathing it can but be injured. Persons are frequently afflicted with a severe, hacking cough, and irritation of the throat and lungs, which appear to yield to no medical treatment. Upon investigation, it is found that the walls of their apartments are covered with paper colored by preparations of arsenic, and upon removing the poisonous paper from the walls the patients soon recover. We speak of these things to put people on their guard; and we have often thought that if the Board of Health would prevent the manufacture of poisonous articles, they would do much to prevent sickness, and increase the general health and well-being of the community.

CHAPTER XXII.

CARE OF THE SICK.

A PERSON who is sick enough to need night-watchers needs rest and quiet, and all the undisturbed repose he can get. If one or more persons are in the room, reading, talking, or whispering, as is often the case, this is impossible. There should be no light burning in the room, unless it be a very dim one, so placed as to be out of sight of the patient. Kerosene oil should never be used in the sick-room; a tallow candle gives sufficient light, and is not objectionable. The attendant should quietly sit or lie in the same room, or, what is usually better, in an adjoining room, so as to be within call if anything is wanted. The attendant can frequently step quietly to the bed-side, to see if the patient is doing well; but all noise and light should be carefully excluded.

It is a common practice to waken patients occasionally, for fear they will sleep too soundly. This should never be done, unless the sleep is terribly disturbed with nightmare or frightful dreams. Natural sleep is one of the greatest needs of the sick, and there is no danger of their getting too much of it. The air in the room should be kept pure and sweet by thorough ventilation.

An apartment for convalescents and invalids should always have a pleasant aspect. Sunlight is essential.

Blinds and curtains may be provided to screen eyes too weak to bear full day ; but what substitute makes up for the absence of that blessed sunshine without which life languishes? The walls should be of a cheerful tint ; if possible, some sort of out-door view should be visible from the bed or chair where the invalid lies, if it is but the top of a tree and a bit of sky. Eyes which have been travelling for long, dull days over the pattern of the paper-hangings, till each bud, and leaf, and quirl is familiar, brighten with pleasure as the blind is raised. The mind, wearied of the grinding battle with pain and self, finds great relief in new interests. And though this glimpse of out-door life — the fresh, natural life from which we are shut out, that life which has nothing to do with pills and potions — may cause the hot tears to rush suddenly into our eyes, it does us all good.

If nurses, if friends, knew how irksome, how positively harmful, is the sameness of a sick-room, surely love and skill would devise some means of relief. If it were only bringing a blue flower to-day, and a pink one to-morrow ; hanging a fresh picture on the wall, or even an old one in a new place, — something, anything, that breaks the monotony, cheers the patient's mind, and tends to lift the soul above the pain and sorrows of earth. Small things and single things suffice. To see many of the surroundings changed at once, confuses an invalid ; to have one little novelty at a time, to vary the point of observation, stimulates and cheers. Give him that, and you do more and better than if you filled the apartment with fresh objects.

It is supposed by many that flowers should be carefully kept away from sick people, that they exhaust the air, or communicate to it some harmful quality.

This may, in a degree, be true of strong, fragrant blossoms; but of the more delicately-scented ones, no bad effect need be apprehended as long as they are kept fresh. A well-aired room will never be made close or unwholesome by a nosegay of roses, mignonne, or violets; and the subtle cheer which they bring with them is reviving to weary eyes and depressed spirits.

VISITING THE SICK. — Many persons, in visiting their sick friends, innocently, or, rather, carelessly, do them a vast amount of injury. They boisterously talk about everything which they can think of, and thereby exhaust the strength of the patient by the excitement which they produce. Visitors are sometimes unwise enough to speak to patients about themselves in a very improper manner; as, “How sick you look!” “How pale you are!” or some other expression of equal significance, which tends to discourage them and protract their illness, and often hasten the disease to a fatal termination.

When you visit your sick friends, be cheerful and serene, and say nothing that will needlessly disturb and injure them. Say little, unless you can say something that will be calculated to benefit them physically or spiritually. If you can do no good, and are satisfied that they cannot recover, you should still maintain a cheerful countenance, and not let your presence be a source of annoyance.

MUSIC FOR THE SICK.

Music arouses the circulation of the blood, wakes up the energies, and diffuses life and animation to every faculty of the soul. But for persons who are really sick, we should omit such music as appeals to the muscles, and tends to lift the foot instead of the affections of the soul, and select only such music as will soothe as well as cheer; music that appeals directly to our spiritual nature; music that tends to lift the soul above the pain and sorrows of earth into the realms of peace and joy.

The human voice affords the best music. But if musical instruments are used, we should select reed instruments, like the organ, melodeon, or accordion. Stringed instruments, like the piano or violin, are exciting, and tend to make the sick tired, restless, and nervous.

Song is the harmonious outburst of our spiritual nature, and increases both our mental and physical activity, and therefore conduces to health. People who have no ear for music, and those who have not been taught to sing the songs of Zion, have lost one of the sweetest parts of our religious worship. Music was a subject of practice and study in the days of David, the sweet singer of Israel. Many instruments have been invented which increase the power of music; but the most refreshing comes from the human voice. Gladness, gratitude, music, and joy should daily make every habitation vocal with the concord of sweet sounds. Music has a direct tendency to open the heart, wake up the affections, and elevate our natures. It was the harp in the hands of the son of Jesse which

exorcised the evil spirits from royalty; and its harmonious strains are still the most effectual to dispel the evil spirit of discontent.

Music is one of the fairest and most glorious gifts of God, for it removes from the heart the weight of sorrow and the fascination of evil thoughts; and the soul that can rejoice and sing with a hearty zest, does not harbor "treason, stratagems, and spoils."

Cultivate music, then; put no restraint upon your joyous nature; let the mind grow and expand; and forever stamp the countenance with the sunshine of gladness, and the heart with the impress of a diviner nature, by feeding the soul in that "concord of sweet sounds" which prevails in the habitations of angels.



HINTS TO NURSES.

Nurses should never desire to be considered "wise above" the physician, but should always act in harmony with him, and faithfully carry out his instructions. Patience and endurance are absolutely indispensable. Nurses should always be gentle and kind, and should never become impatient of their labors, or of the duration of the patient's illness; for most patients would sooner suffer than ask a favor of an impatient and fretful nurse.

CLEANLINESS. — It is of the first importance that the sick-room be kept perfectly free of everything in a state of decomposition, or that emits an offensive odor. No evacuation from the patient, or other offensive matter, should be allowed to remain for a moment in the sick-room.

VENTILATION. — As pure air is one of the most important agents in restoring the sick to health, it should always be freely admitted into the sick-room. This may be obtained by properly ventilating the apartment. In dry weather, air may be admitted directly from without. In damp weather it may be effected by opening the door of the sick-room, and admitting air from the hall or other rooms. The air should never be allowed to rush in directly upon the patient.

STILLNESS, or quiet, is always essential to the comfort and convalescence of the sick, and sometimes indispensable to life. The creaking shoes of the nurse or other attendants, the careless shutting of the doors of the room or stove, loud conversation, and the like, should never be suffered to annoy those who, from debility or nervous excitement, are unable to endure such disturbance.

TEMPERATURE. — The temperature of the room should vary according to the nature of the sickness. In colds, croup, congestion of the lungs, and such diseases as cause sensations of chilliness, the temperature should be up to summer heat, but the air should be changed often, and not allowed to become stifled or confined. In fever, where there is constantly a painful sensation of heat, the temperature may be allowed to fall below that point, to suit the condition of the patient. But nurses should take great care to keep an even temperature. We have seen the most serious consequences resulting from inattention to this matter. Through the day the temperature has been kept up, perhaps, to summer heat; and then, for the ease or rest of the nurse, it has been suffered in the night time to fall, possibly below the freezing point.

This evil should always be avoided, as absolutely dangerous.

CHANGE OF DRESS AND BED-CLOTHES.—It is very essential to the comfort of the patient that the dress and bed-clothes be frequently changed. There are some nurses who excuse themselves from this important labor, lest their patient should take cold. If the fresh clothes are well dried, and brought warm, and the patient is not too much exposed to the air from without while exchanging clothes, there is little danger of taking cold. Nor is there any apprehension of the patient being exhausted by the exertion, except in some instances of great debility. Often, indeed, have we heard patients expressing great pleasure from the change. They always feel refreshed. Nor is the pleasure realized by the patient alone. The sweetness and purity of the atmosphere is a rich compensation to the nurse and friends for all their labor.

SLEEP is indispensable to health ; and, constituted as we are, it is a wise provision of the Author of nature that night comes at proper intervals, when the exhausted energies may be revived by “tired Nature’s sweet restorer.” The importance of sleep as a recuperative agent for the sick has been too much overlooked by both physician and nurse. The integrity of neither mind nor body can long be maintained without refreshing sleep. And when the body is invaded by disease, and sleep refuses her aid, there must be a rapid destruction of the whole system. If proper remedies are used, and disease removed, sleep comes to our aid, and health is restored. We do not in this connection refer to that stupor which is the result of the use of narcotics, for that does not refresh or recuperate the system, but is only a partial suspension of

sensation — an unnatural condition, in which disease often progresses more rapidly than at any other time, and by their use the chances of recovery are often diminished. Invalids need more than the ordinary amount of sleep; and it is often necessary that they should sleep during the day; and when sick persons or invalids have a natural desire for sleep, we protest against keeping them awake for fear they will not sleep well during the night. They should have all the natural sleep Nature calls for, either by day or by night; and nurses should so manage that their patients be not awakened from their quiet slumber to receive visitors or to take medicine.

THE BED. — The mattress is preferable to the feather-bed. The strength of patients is often kept down from exhaustion caused by lying upon old and diseased feathers. Their strength would at once be perceptibly increased were they placed on good mattresses. But there can be no reasonable objection to feathers, provided they are fresh, or often cleansed and renovated. The evils resulting from their use arises principally from the emanations of animal matter about the ends of the feathers, when they are not properly aired.



DIET FOR INVALIDS.

The importance of proper diet for the sick has long been overlooked by both physician and nurse. We should all be impressed with the necessity of a proper supply of nutrition for the support of the body. This we must all admit, when we remember that all vital force is the direct product of food; that every motion

of the body, every breath, every thought, every volition of the mind or will, requires an expenditure of the vitality of the blood and tissue of the body; and that this waste of the system can only be supplied by digestion and assimilation of food. No stimulants can ever repair this waste; no drugs can ever arrest its progress. Food and nutrition are the only possible means of supplying this waste of the body; and when this is not supplied, all functions cease, and death is the final result.

Starvation, in some degree, is always produced when the aliment is insufficient, either in quantity or quality, for repairing the losses which the blood sustains, and supplying to the solids material for nutrition. It is not unfrequent that the stomach of an invalid is reduced in its digestive powers to the capacity of a child. The food, in all such cases, should be prepared with as much care as if it were for an infant.

In regard to the kinds of food best suited to invalids, there has been, and probably always will be, a difference of opinion. When there is no peculiar idiosyncrasy to prevent its use, we believe that milk is the most natural, most universal, and the best food for the sick. The top of the milk is not too rich, except in inflammatory diseases. Milk will nourish and supply the waste of nerve and tissue, and restore strength to the patient, better than any other known substance, supplying, as it does, every want of the system.

BEEF TEA, in its various forms, has become very popular as food for the sick. But it is evident that we do not obtain the nutritive principle of the beef in any of these preparations. Beef-tea is reviving and stimulating, and we do not object to its use. But to

make blood, and to build up muscle and tissue, to supply the nutrient constituents necessary to form the solid substrata of organs by such food, it is necessary that the flesh should be used in its *entirety*.

ARROWROOT. — The different kinds of arrowroot possess the same properties, and are used in the same manner. Mix a dessert spoonful of arrowroot with sufficient cold water to form a soft paste; rub it until smooth, and add half a pint of boiling water, stirring briskly; boil one or two minutes, and when removed from the fire, add a little nutmeg or cinnamon, and sugar, to suit the taste. Milk may be used instead of water, if desired.

SAGO. — Wash one ounce in cold water; then boil it gently in one pint of water, stirring until dissolved. Common commercial sago is usually steeped some hours before boiling. It may be flavored with spices and sugar, like arrowroot, and made with milk when preferred.

TAPIOCA. — Tapioca is used in the same way as sago, but requires to be previously steeped for some hours, or simmered for a longer time, until it forms a clear jelly.

SAGO OR TAPIOCA MILK. — Take one ounce of these feculæ, and soak in a pint of cold water for one hour; then pour off this water, and add one pint and a half of sweet milk; boil slowly until well incorporated.

TAPIOCA PUDDING. — Beat up half an ounce of sugar with the yolks of two eggs, and stir the mixture into a pint of tapioca milk as above. Arrowroot pudding may be made in the same way.

PANADA. — Place in a saucepan some very thin slices of cold bread; add rather more water than will cover

them ; boil until the bread becomes pulpy ; strain off the superfluous water, and beat up the remainder to the consistency of gruel ; sweeten with white sugar.

IRISH MOSS. — Steep one fourth of an ounce of moss in cold water for a few minutes, then withdraw it, shaking the water from each sprig ; boil it in a quart of milk until it attains the consistence of jelly. Sweeten to the taste.

BLANCMANGE. — Wash half an ounce of moss as above ; boil in one and a half pints of milk. Sweeten and flavor to the taste.

BOILED WHEAT. — Steep the wheat in water for ten or twelve hours, then boil for half an hour. Used as a substitute for vegetables, and to obviate constipation.

BEEF-TEA. — Take one pound of beef free from fat, cut it into very small pieces, and add a pint of cold water. Heat to the boiling point, let it simmer five minutes, then strain through a cloth with pressure, and salt to the taste. Or it may be made as follows : —

Cut up the lean meat into fine pieces, place it in a tinned vessel, or bottle, and add just enough water to cover it. Place the vessel in water, which heat until it boils, and continue the boiling ten or fifteen minutes. Then remove the vessel, turn off the juice, break up the pieces of meat, and press them through a cloth, adding the juice to that previously obtained.

GRUEL FROM GROATS (*oats deprived of their cuticle*). — Take three ounces of groats, previously washed, boil slowly in four pints of water until it is reduced to two pints, then strain through a sieve.

CHAPTER XXIII.

DISEASE.

ANY deviation from the natural standard of health may be called disease. The existence of disease is made known to us by the presence of symptoms, which are of various kinds: first, uneasy, painful, or impaired sensations; secondly, disordered or impeded functions; and, lastly, change of structure.

The causes of disease have been divided by writers upon the subject into exciting and predisposing. Certain causes excite certain diseases, but a predisposition to take the disorder is prerequisite. Exposure to cold or wet, brings on a cold or catarrh. Dampness, then, is an exciting cause of cold; but out of twenty people exposed to the same amount of dampness, only a portion are materially affected; the same amount of exposure in the same individual sometimes induces a cold, and sometimes does not.

The exciting causes of disease are many and varied. The manner of living, excess in eating and drinking, which injures the secretions, obstructs the circulation, and thus produces local congestion and inflammation; the suppression of excretion, and the various poisonous emanations and miasmata floating in the atmosphere—all are direct causes of disease. But the most important of the exciting causes is the alternation or change of temperature. Dr. Bateman, in his ob-

servations upon disease, says, "With the exception of a small number of diseases occasioned by unwholesome occupations, and by the contagions, the great mass of human malady is referable to the climate, or state of the seasons, and to intemperance; but of these two causes, the vicissitudes of the weather, especially its cold, are the most prolific sources of mischief."

Exposure to cold may not exert serious injury upon the system, unless the body be in such a condition as shall favor the induction of disease. As long as the power of generating heat is active in the body, exposure to cold, unless too severe or long continued, does little harm; but when from fatigue or any other cause that power is lessened, the application of cold is followed by disastrous consequences.

So, also, the emanations from drains or cesspools, or the decomposition of vegetable or animal matter, do not produce their legitimate results except in those persons who have not the power to throw off their pernicious influences.

Diseases are divided into two classes—acute and chronic. By acute disease, is understood those forms of recent attacks in persons in whom the vital powers of Nature react upon the disease, opposing its progress, removing obstructions, and, by means of the excretions, eliminating the cause of the difficulty from the system. In such cases the powers of Nature are strong, active, and vigorous, and often able to cope with the enemy, which for a time has possession of the body, and will, in a majority of cases, with a little care and attention, restore the system to health, even if no medicines are employed.

In case the vitality of the system is insufficient to

overcome the disease, and proper remedies are not administered, Nature's powers of resistance and endurance become weakened by long-repeated but fruitless efforts to establish the supremacy, until at last she ceases to contend, and the disease becomes chronic.

Chronic disease may be functional, organic, or depend upon some morbid material or virus in the circulation. A functional disease is one in which the performance of the function of an organ, or organs, is changed from its normal standard, either excessive, defective, or perverted. An organic disease is one in which the structure of the organ itself becomes affected. Morbid material in the blood, when in excess, becomes deposited in the tissues. Cancer, scrofula, and tuberculosis are instances of this class of disease.

Chronic diseases, also, are more insidious in their nature, and not unfrequently hide themselves from common observation by affecting principally the secretions and excretions, thereby clogging up the avenues of life, depriving the blood of its nutriment and vitality, and the muscles of their strength and power. The organs of the body having lost their healthy tone, the power to properly assimilate food into nutriment has become so weakened that the body languishes, the muscles become weakened, the nervous system becomes irritable, and, after a time, prostrated, while the blood, and consequently the whole system, is gradually wasting away. In still other constitutions the patient retains his flesh, and, to persons unacquainted with disease, might appear healthy, while at the same time the diseased and morbid material is infiltrated into every tissue of the body; and yet the person is perhaps all the while eating

heartly food, and, in many cases, with apparently good relish; but the more he eats the more diseased material is deposited in the tissues.

A large portion of the diseases for which the medical profession are called upon to prescribe, can be traced, in their secondary causes, to a want of proper action of the secretory organs, whose duty it is to assimilate nutrition, and afford the material by which the cells and tissues of the body are built up; and to the excretory organs, which fail to throw off the worn-out, broken-down, dead, and effete matter from the system.

The treatment of chronic diseases, and many of the acute diseases, is too complicated to be thoroughly comprehended and applied by the people generally, and is, therefore, not necessary to be given in a work of this kind. There are, however, many of the minor diseases which may be treated in the family by such means as are always at hand, and by the common herbs which may be readily procured. It often happens that people living in the country are unable to procure the services of a physician on account of distance, in which case a slight knowledge of the treatment of disease might be of great benefit in relieving suffering.

That the people may have this necessary knowledge, or at least something that may be readily referred to in time of need, we have collected and arranged some of the most common affections, with the manner in which they should be treated.

We do not intend that this work shall supplant or obviate the necessity of a doctor; for in many cases the risk is too great, and the responsibility too heavy, to rest with any other than the physician. But where

from distance or otherwise, professional advice cannot be obtained, the following directions as to treatment, &c., will be found of the greatest advantage.

TREATMENT OF MINOR DISEASES.

COLDS. — The causes of colds are so numerous, that no rule can be laid down to avoid them, other than to dress comfortably and with due attention to the state of the weather, the condition of the body, and the places where you are to go. If you find at any time that you have taken a violent cold, abstain from eating, except a little gruel, if necessary, and immediately place yourself in a warm room, and take freely of a tea of pennyroyal, boneset, or pleurisy root; or, if necessary, ginger or cayenne, and if there are symptoms of fever, a little lobelia may be added. By these means, free perspiration will be induced. Keep in a warm room, free from exposure, continuing the treatment, and the cold will soon disappear, without any serious derangement to the system. People do not always feel that they can give up for a cold, and so keep about their business, and finally, perhaps, wear it off. But it is at a risk of serious injury to the constitution, if not fatal disease.

CATARRH. — Catarrh is often a sequence of a badly treated cold. In its incipient state it is easily cured by snuffing or injecting into the nose a solution of salt and water, or a decoction of golden seal, witch-hazel, or sumach leaves. If the disease has become chronic, it will be necessary to resort to constitutional treatment.

CANKER. — Simple canker may be relieved by a so-

lution of alum, or an infusion of sumach berries, raspberry leaves, or golden seal.

What is called by many people red canker, which often extends through the system, is dependent upon humor in the blood. The cause should therefore be removed before a permanent cure can be expected.

CROUP, SORE THROAT, &c. — In the various diseases of the throat the indications of cure are much the same. Warm herb teas should be drank freely to promote perspiration. The hot foot-bath is a valuable adjuvant. Cloths wrung out in hot water and vinegar, or a decoction of hops and lobelia, may be applied to the throat. To relieve the difficulty of breathing, the vapor of water or vinegar, or that arising from the boiling lobelia and hops, may be inhaled.

In case there are symptoms of membranous croup, more active treatment should be resorted to. Lobelia and bloodroot, with a little cayenne and soda, should be given, sufficiently strong to keep the throat clear, and induce vomiting if necessary. This treatment should be continued until all the alarming symptoms disappear.

ASTHMA. — For the temporary relief of asthma, lobelia should be administered. Brown paper may be soaked in a saturated solution of saltpetre, dried, and ignited, the patient inhaling the fumes.

MUMPS. — This disease has a specific course to run, and little can be done except to relieve undue suffering. The swellings should be kept from exposure to the atmosphere by a covering of cotton. Warm teas should be administered, the circulation kept equal, and the bowels regular. The diet should be light but nutritious. If the parts affected are very painful, a mild liniment may be applied. In all cases, exposure to cold should be avoided.

DYSPEPSIA.—Dyspepsia is caused by a derangement of the digestive organs, usually resulting from irregularity or intemperance in eating or drinking, want of exercise, or other irregular habits. The disease, having so many and varied causes, no one course of treatment can be laid down that will answer in all cases.

If the disease is dependent upon irregular habits in eating, these habits must be corrected before a cure can be hoped for. If from lack of exercise, mental anxiety, costiveness, &c., these must be obviated by proper observance of the laws of health. If dependent upon an atonic state of the organs of digestion, with enfeebled action, a tonic, such as gentian, camomile, or golden seal may be taken. If from acidity of the stomach, sirup of rhubarb, with a small amount of cooking soda, will relieve the difficulty.

In all cases it is necessary that the diet should be light, and of material easy to be digested.

WATER BRASH.—Water brash may be cured by a decoction of poplar bark or golden seal, or if the stomach is acid, a solution of soda.

HEARTBURN.—This affection may depend upon acidity of the stomach, the presence of wind, or acrid substances. In the first case, carbonate of soda or magnesia may be taken in a little mint water. If there is wind, a mixture of oils of lavender, anise, and clove will give relief. If dependent upon irritating substances, a decoction of rhubarb, golden seal, and peppermint, with the addition of a little soda, should be given, and, if necessary, carried to free catharsis.

VOMITING.—Vomiting may often be controlled by drinking an infusion of spearmint, or any of the aromatic mints; or by an infusion of peach-tree bark,

with a single grain of ipecac. Should the above means prove insufficient, a mustard paste may be placed over the region of the stomach.

COLIC. — Colic may be relieved by the compound powder of jalap and senna (which may be obtained at any druggist's), in doses of five grains every fifteen minutes, followed by the free use of mint teas. Catnip tea serves an excellent purpose in infantile colic.

CHOLERA MORBUS. — Quick relief may be obtained from the following preparation: tinctures of cajeput, anise, peppermint and clove, of each one drachm; water, two ounces. The dose of this is from one fourth to one half a teaspoonful every few minutes, until the pain subsides. If nothing better is at hand, half a teaspoonful of black pepper, and an equal quantity of salt, may be mixed in a cup of hot water, and administered freely. Hot fomentations may be applied to the abdomen, and if the extremities are cold, they should be rubbed briskly with flannel cloths wrung out in hot mustard or capsicum water.

DIARRHŒA. — For diarrhœa, take equal parts rhubarb and soda, half the quantity of cinnamon, golden seal, and peppermint, boil, and render pleasant to the taste by sweetening. A teaspoonful may be taken every half hour until the bowels are cleansed. If the diarrhœa continues, take an infusion of blackberry root, or other mild astringent.

CONSTIPATION. — This unnatural state of the bowels may be caused by peculiarity of diet, irregular habits, or lack of exercise; or it may be the result of constitutional derangement.

This disease is to be obviated by an attention to diet; by observing certain regular periods for movement of the bowels; and where these fail, by having

recourse to laxatives and injections. The diet of those who are of costive habit should consist chiefly of vegetables and ripe fruits. The laxatives most proper for obviating this difficulty are those which afford the least irritation. Rhubarb, carbonate of potash, or sulphate of magnesia, are perhaps the best.

WORMS. — For common worms in the intestine, Carolina pink root and senna are old remedies.

Pin-worms may be destroyed by injections of a strong decoction of wormwood. This will remove every one which it reaches; but as they secrete themselves in the lining membrane of the bowels, it is necessary to repeat the injections. It is advisable, also, to drink a tea of the same. If the bowels are costive, a cathartic should be administered.

The treatment for tape-worm is too intricate to be readily understood, and should be under the direction of a physician.

PILES. — In the treatment of piles, the first object will be to obviate costiveness, and to regulate the bowels by laxative medicines and a due course of regimen. Cleansing injections of witch-hazel, sumach leaves, or other mild astringent, should be given, and the following compound taken: Cream of tartar, jalap, and senna, of each one ounce; flour of sulphur, half an ounce. Mix, and take in doses of a quarter of a teaspoonful in a little sweetened water, night and morning.

If there is irritation and pain, apply some simple ointment.

SUPPRESSION, OR PAINFUL MENSTRUATION. — In simple suppression or painful menstruation from colds, &c., the following treatment will be found effectual: A hot tea of pennyroyal should be administered freely,

accompanied by an occasional dose of motherwort or tansy tea, a hot foot bath be given, and the patient covered warmly in bed. Cloths wrung out in hot water, or hot fomentations of hops may be applied over the abdomen. The teas should be continued until free perspiration is induced, when relief will be obtained.

If there be organic or constitutional disease, medical advice should be procured.

SUPPRESSION, OR DIFFICULT MICTURITION. — The treatment for these difficulties is nearly the same as the above, except that besides the tea of pennyroyal, spearmint, cleavers, or mountain cranberry, should be given freely.

WARTS AND CORNS. — Warts and corns may be removed by paring away the thick skin, and applying nitric acid once or twice a day. This will soon destroy their vitality, when they may be easily detached without pain or soreness.

TO RELIEVE ITCHING. — Many people are troubled with excessive local itching, which, although not serious, gives rise to great inconvenience. Relief may be obtained by a solution of borax, or a decoction of sumach or witch-hazel. If these fail, take equal parts of tar and glycerine, and heat in separate vessels. As soon as they reach the boiling point, mix, and stir rapidly. When cold, apply to the parts affected as often as necessary.

CHAPPED HANDS AND LIPS. — Take a quarter of a pound of glycerine, heat, and add two teaspoonfuls of starch; stir and allow to cool. Apply to the parts as often as necessary to keep the skin soft and moist. Avoid exposure to cold.

CHAPTER XXIV.

CHAPTER OF ACCIDENTS.

It often happens in emergencies, as in accidents, where immediate and energetic action is called for, that no person present has the requisite knowledge and presence of mind to afford the necessary relief. In such cases much might be accomplished for the comfort of the patient, before the arrival of a physician, by a little knowledge and forethought on the part of persons witnessing the accident.

In the following pages we have endeavored to present, in as condensed a form as possible, a few suggestions that may easily be remembered, or readily referred to, as to what should be done in cases of accident or emergency ; and we doubt not that, by a little thought and attention, much suffering, if not actual loss of life, may be prevented.

If a person has been thrown from a carriage, injured by falling from a height, or by a blow, or almost any cause, even though there may be no external lesion or apparent injury, the nervous system may have suffered from the shock, and a condition, which is closely allied to faintness, has been produced. In all such cases the person should be placed upon the back, and the limbs straightened out, so as to give free circulation to the blood. The head and shoulders should not be raised, as this retards the passage of blood to the brain. The

collar, and all constriction about the neck and chest, should be loosened or removed, and in no case should a crowd be allowed to obstruct the free circulation of air by collecting about the patient. Active stimulants should immediately be administered. Cayenne, ginger tea, pepper sauce, or hot herb teas, may be given freely to start the circulation and promote perspiration. Ammonia may be applied to the nostrils, or the aromatic spirits of ammonia administered in doses of a few drops in water. If nothing better is at hand, use a little brandy, or other alcoholic stimulant.

Friction to the extremities, flannels wrung out in hot water and applied, materially aid in establishing reaction. Bottles of hot water, wrapped in cloths, may be placed at the feet and sides. Should nausea and vomiting accompany the shock, it should cause no alarm, but if continued, may be arrested by the administration of spearmint tea, and a mustard paste placed over the stomach.



FAINTING.

Fainting is closely allied to Shock, differing from it in degree and duration rather than in kind. The treatment in case of fainting is to place the patient in a recumbent position, with no elevation of the head and shoulders, and to allow a free circulation of fresh air. Cold water may be dashed upon the face and neck, to promote a reaction of the vital powers. The limbs may be chafed, and a volatile stimulant, as ammonia, applied to the nostrils.

CONVULSIONS.

Convulsions or fits are a cause of much unnecessary alarm among those unacquainted with disease, and in endeavoring to do something to relieve the patient persons often only aggravate the difficulty. Convulsions are usually of two kinds, epileptic and apoplectic. The first is characterized by convulsive movements of the whole or a part of the body, and frothing at the mouth, the froth being sometimes tinged with blood from the convulsive gnashing of the teeth lacerating the tongue or lips. The face, at first pale, soon becomes livid, except about the mouth, which nearly always remains white. The attack, although it seems long to those witnessing the terrible convulsions, rarely lasts more than four or five minutes, at the end of which time the patient either recovers entirely, and walks away, or falls into a deep stupor.

In apoplexy, the patient suddenly loses consciousness and falls, but there is no convulsive movement. The face is turgid, red, or purple, and the breathing loud and stertorous.

As regards treatment, little can be done to benefit the patient while the fit lasts. In both cases, all constriction about the neck and chest should be loosened, and a free supply of air allowed. In epilepsy, a cork, or piece of wood may be placed between the teeth to prevent the patient biting his tongue, and he should be prevented from injuring himself or others by the force of his convulsions; but, unless to prevent such injury, the limbs should be left free. In apoplexy, the patient should be turned upon his side, to prevent the tongue from arresting respiration; the right side is

preferable, as this position prevents the circulation from being obstructed by the pressure of internal organs upon the heart and blood-vessels. Friction and hot applications to the extremities are sometimes useful.

Hysterical or infantile convulsions are more amenable to treatment than epilepsy and apoplexy, although little can be done in either during the violence of the attack. But means should be instituted to remove the cause and prevent their recurrence.



DROWNING.

Drowning is asphyxia, or suspended animation, produced by the presence of water, which prevents the entrance of air into the lungs, and consequently the process of aeration of the blood is arrested. It is a prevalent idea that the water enters the lungs; but this is a mistake. The glottis (the valve at the entrance to the lungs) is so sensitive that the presence of water produces irritation and closing of the organ, thus effectually preventing its entrance into the lungs, but does not prevent it from entering the stomach. It is only when death has taken place, and consequently relaxation of the glottis, that water can find entrance into the lungs. Hence it is not necessary to use violent means, such as rolling the body, holding it upside down, &c., but simply turn the patient face downward, and remove the water or mucus from the mouth with the forefinger.

The body should then be placed upon a warmed bed, stripped of the clothing, and rapidly dried. Friction with the dry hand or heated flannels should be

applied vigorously. Meanwhile respiration must be restored by artificial means. A person standing at the head of the patient should grasp the arms, and, drawing them away from the sides, raise them until they meet over the head. By these means the walls of the thorax are raised, and a vacuum created, into which the air rushes. The arms should then be depressed to the sides, and the elbows be made to meet over the "pit of the stomach," enough pressure being made to force the air from the lungs. The same process should be repeated from fifteen to sixteen times a minute. The establishment of respiration may be assisted by any person present who has sufficient skill to pass a flexible tube into the glottis, and inflate the lungs from his own breath. But blowing into the stomach, through the mouth, is of no practical advantage. After respiration is established, the patient should be covered warmly in bed.

Recovery from drowning can scarcely be expected to take place after immersion of five or ten minutes, although there are well-authenticated cases on record where restoration has been effected after immersion for a much longer time. The efforts at resuscitation should be persisted in for an hour or more.



SUFFOCATION.

Death from suffocation, by inhaling noxious gases, hanging, choking, &c., takes place by the same process as drowning, except that in one case water prevents the aeration of the blood, and in the others gases cause the closing of the glottis, or the air passage has been

constricted. The treatment is essentially the same as for recovery from drowning, except that in case the body is warm, cold water may be dashed upon the face and chest, to aid in establishing respiration.



SUNSTROKE.

It is generally believed that sunstroke comes on suddenly, without any warning whatever. But this is not true; the final effect is preceded by pain in the head, the thoughts become confused, the sight becomes affected, and the patient feels a sense of oppression, and inability to breathe freely. It is well to observe these symptoms, as a person feeling their approach may, by retiring to a cool and shady place, escape the full effect of sunstroke.

When a person falls unconscious, after exposure to the sun or great heat, he should be taken immediately to a cool, covered spot. It will be observed that there is great heat in the skin, and it is supposed that the unnatural heat of the body produces some change in the blood, by which the action of the heart is gradually lessened. It is obvious, then, that anything that will reduce this excess of temperature, and bring the body back to its natural state, will aid materially in recovery. For this purpose the clothing should be removed, the patient laid upon the ground, with the head and shoulders raised, and the entire body dashed with cold water. Ice-water is preferable, and it may be thrown on in sufficient quantities to carry away the surplus heat. The surface of the body may be rubbed briskly by crushed ice wrapped in a towel. Ice may

also be applied to the head. But none of these cooling applications should be continued after the body is reduced to its natural temperature. As soon as possible a stimulant should be administered, to sustain vital action.



BURNS AND SCALDS.

If a person's clothing has taken fire, he should be immediately laid down, to prevent the flames rising towards the head and face. A rug, blanket, coat,—anything with which to smother the flames, should be thrown about him, enveloping him from the head downward, so as to prevent the entrance of flame or hot air into the lungs.

After an injury by burning or scalding, the clothing should be removed from the injured part, and cold water immediately applied. If the burn has been extensive, a great shock to the nervous system will be experienced, necessitating the administration of stimulants. Cloths kept constantly wet with cold water should be applied to the burn until the pain is diminished. After this, if thought best, a dressing of sweet oil or sweet cream, or a poultice of slippery elm bark or charcoal may be applied. White of egg, lime water, and linseed oil are often useful. Never, under any circumstances, dress the part in cotton batting, or sprinkle flour upon the burned surface, as they are of little use, are difficult of removal, and prevent the direct application of remedies more important.

Burns by lime, potash, and other alkalies, should be thoroughly washed with water, and an acid, as

vinegar or lemon juice, applied. Burns by acids require the application of an alkali, as soda, ammonia, &c., in order to neutralize the acid.



FROST-BITES.

When portions of the body which are far from the heart, as the fingers, toes, nose, and ears, are exposed to an intense degree of cold, a condition is produced known as frost-bite. The first sensation in a part thus exposed is a tingling or smarting pain; there is a slight puffiness and purplish discoloration, owing to the impeded circulation. Gradually the part becomes pale, the circulation of blood is arrested, the pain ceases, and the person congratulates himself, little thinking that the part is frozen. If active means are not now taken to restore the circulation, disorganization and death of that portion takes place, followed by sloughing and detachment from the living tissue.

What thus takes place in a part of the body may take place in the whole, when the person is said to be frozen to death. By continued exposure to cold, the blood in the extremities is gradually forced towards the body, engorging the larger blood vessels, heart, lungs, and brain, and producing an almost unconquerable inclination to sleep. But in this condition sleep would be followed by death.

In case of freezing, active and energetic means must be brought to bear to re-establish the circulation of the blood. Never apply heat, as resuscitation depends upon a gradual return of the circulation, and if the body is heated suddenly by external means death may

follow. The body should be taken immediately into a cold room, the clothing removed, and friction applied briskly. The body may be rubbed with snow, or cloths wet in cold water, the friction being continued until signs of returning animation become manifest, when the patient must be thoroughly dried. Meanwhile artificial respiration should be kept up until the natural breathing is established. The patient should still be kept in a cold atmosphere, and as soon as consciousness returns, stimulants, as aromatic spirits of ammonia, ginger or beef tea, should be administered. Gradually the temperature of the room should be raised, but the patient should be kept from too near approach to the fire.

Freezing of the ears, nose, or extremities must be treated upon the same principle, the parts being rubbed with snow, or kept wet with cold water, in all cases avoiding exposure to heat.



INJURIES.

HEMORRHAGE.—The free flow of human blood seems to possess the peculiar power of intimidating even persons of otherwise strong nerve and great presence of mind. They see before them the patient lying pale, the life-blood jetting from the wound, realize that, with each heart's throb, his life-blood is wasting away, and they stand appalled, unable to render the least assistance, when the pressure of a finger would have arrested the ebbing life. A butcher accidentally struck a knife into his thigh, cutting the femoral artery. Immediately the blood spouted up-

ward in jets, and the man stood staring helplessly at the fearful flow until he fell exhausted. Although a butcher, and used to sights of blood, his faculties now seemed dazed, and he was rendered helpless as an infant, when the pressure of his thumb over the artery, a little above the wound, or a compress bound tightly down by bandages about the thigh, would immediately have arrested the flow, and preserved his life, until the arrival of a physician. In such cases, where a large artery is severed, a stone, or other smooth, rounded substance, should be rolled in a cloth, placed over the wound, or the artery above the wound, or both if necessary, and bound down by tying a bandage or towel tightly over it and around the limb. If the bandage cannot be tied tightly enough to arrest the bleeding, a stick may be run through the knot and twisted until the desired pressure is effected.

When the wound is near a flexure of the joint, the limb should be tightly flexed, and held in this position until the flow is arrested.

If the bleeding is simply a welling up of dark blood, a compress, wet in cold water, and applied tightly over the seat of the injury, will be all that is required.

In case of bleeding from the nose, pressure upon the facial artery, which may be easily found by its pulsation, where it crosses the lower jaw, will often arrest the hemorrhage. But where it is from the deeper arteries, the external application of cold, as ice, snow, or even cold water, may be used; or snuff, or inject into the nose, a solution of tannin, witch-hazel, or some other mild astringent.

WOUNDS.

Wounds are classified, according to their method of infliction, into — Incised wounds, as when a cut or incision is made ; punctured wounds, as in cases of stabs, pricks, or punctures ; contused wounds, in which the part is bruised or crushed ; lacerated wounds, in which the tissue is forcibly torn away ; and poisoned wounds, including all wounds into which a poison has been introduced.

Wounds should first be cleansed thoroughly from all foreign matter by a judicious use of cold water ; after which the bleeding may be arrested according to the methods previously advised.

If the injury is an incised wound, the edges should be brought together by stitches, or strips of adhesive plaster, care being taken not to cover the whole surface of the wound, and thereby prevent the blood and pus (the results of the process of healing) from escaping. In all cases the wound must be allowed to discharge freely, as the confinement of decomposed blood and pus within the wound is always dangerous, and liable to be followed by serious results.

Having applied the adhesive strips, and approximated the lips of the wound, it should be properly dressed. The simplest dressing, and the one most readily obtainable, is cold water. A mixture of equal parts of the tincture of lobelia and balm of gilead buds forms one of the best applications, preventing inflammation, and aiding the process of healing. Cloths may be thoroughly wet, and applied to the wounded surface, being held in position by means of bandages. The cloths should be kept constantly

wet, and not allowed to dry, and the dressing may be changed every twelve or twenty-four hours.

In most instances the wound will readily heal without discharging extensively; but should this not be the case, and the discharge become profuse, especially if the patient's general health be poor, a physician should be consulted, who will apply such treatment as will restore the health and improve the condition of the wound.

Other classes of wounds are treated in a similar manner, except that, as the surface is left ragged and torn, it is useless to expect rapid healing, the wound "granulating," or filling up, from the bottom. The process is slow, and the surface of the wound should be kept moist and guarded from exposure to the air by some soothing and non-irritating ointment, and the process of suppuration and free discharge of matter favored as much as possible.

Under the head of poisoned wounds are included, not only the bites of poisonous serpents, stings of insects, &c., but all wounds into which any poisonous substance or virus has been introduced.

In case a person is bitten by a poisonous serpent or mad dog, most active and vigorous treatment is necessary. If the wound is in a limb, a strong cord, handkerchief, or anything that will answer the purpose, should be tied as tightly as possible about the limb above the seat of the injury, by this means arresting the circulation to and from the part, and hindering the absorption of the virus. At the same time another person should gather the skin about the wound between the thumb and forefinger of both hands, raise it, and exert the utmost pressure possible, thus cutting off the circulation of blood in the immedi-

ate vicinity of the part injured. The lips may be applied to the wound, and the strongest suction made, to extract the venom. One may do this with perfect safety, provided there is no laceration or injury of the lips to admit of absorption of the poison. The parts about the wound may be cut out, although, unless done immediately, this is of little use. A poker or nail may be heated red hot, and thrust into the wound, thoroughly cauterizing the tissue, thus preventing the further absorption of the poison.

If a dog, supposed to be mad, has inflicted the injury, he should not be killed, but should be kept in confinement; for, in case he is not mad, as will be made apparent in the course of a few days, the effect upon the mind of the patient is almost inconceivable. Cases are recorded of persons bitten by dogs who have died in convulsions from the morbid effect produced upon their mind by fear and dread, when the dogs were known to be only frightened or enraged.

It is asserted by competent authority, that not more than one of ten persons bitten by rabid dogs is affected with hydrophobia, although the percentage of deaths among animals is somewhat greater.

In order to prevent mistakes arising, and to enable persons to decide as to whether the animal is mad or not, we append Mr. Youatt's description of the symptoms of a dog suffering from hydrophobia:—

“The disease manifests itself under two forms. The *furious* form, characterized by augmented activity of the sensorial and locomotive system, a disposition to bite, and a continued peculiar bark. The animal becomes altered in habits and disposition, has an inclination to lick or curry inedible substances, is restless, and snaps in the air, but is still obedient and attached.

Soon there is a loss of appetite, with thirst; the mouth and tongue swollen; the eyes red, dull, and half closed; the skin of the forehead wrinkled; the coat rough and staring; the gait unsteady and staggering; there is a periodic disposition to bite; the animal in approaching is often quiet and friendly, and then suddenly snaps; later there is paralysis of the extremities; the breathing and deglutition become affected by spasms; the external surface irritable, and the sensorial functions increased in activity, and perverted; convulsions may occur. These symptoms are paroxysmal; they remit and intermit, and are often excited by sight, hearing, or touch.

“The *sullen* form is characterized by shyness and depression, in which there is no disposition to bite, and no fear of fluids. The dog appears to be unusually quiet, is melancholy, and has depression of spirits; although he has no fear of water, he does not drink. (The fear of water, it should be said, is acquired by experience, the effort of swallowing being attended with spasm of the muscles of the throat, afterwards often extending to the rest of the muscles of the body.)

“He makes no attempt to bite, and seems haggard and suspicious, avoiding society, and refusing food. The breathing is labored, and the bark is harsh, rough, and altered in tone; the mouth is open from the dropping of the jaw; the tongue protrudes, and the saliva is constantly flowing. The breathing soon becomes more difficult and laborious; there are tremors, and vomiting, and convulsions.”

In this part of the country there are few insects whose bite or sting is fatally poisonous; but, in many instances, the bites are followed by pain, swelling, and

inflammation. The stings of bees and wasps, and the bites of spiders, are sometimes followed by severe pain and swelling. In all such cases, a drop of ammonia, or of a mixture of ammonia and lobelia, applied to the part, will give almost instant relief. If these articles are not easily procured, a small quantity of common table salt, moistened with water, will relieve the pain. Moist earth forms an excellent application.

FOREIGN BODIES IN THE EYE, EAR, &c.

Foreign bodies sometimes get into the eye, ear, or nostrils, causing great trouble or distress, and, if not removed, often leading to serious results.

Particles of dust, cinders, and minute substances floating in the atmosphere, are often lodged in the eye, causing acute suffering. Nature immediately endeavors to remove this foreign matter by a profuse flow of tears. If this fails to remove the substance, it may be frequently ejected by holding the eyelids open, closing the mouth and nostrils, and making an effort to blow the nose. If the particle has lodged in the upper portion of the eye, the upper lid may be raised, and drawn down over the lower one. In this case the eyelashes of the lower lid act as a brush, and tend to dislodge the substance.

If these means should fail, the eyelids may be inverted by holding a knitting-needle, or anything which will serve the purpose, over the lid, close to the edge of the orbit; then, seizing the lashes with the fingers of the disengaged hand, gently turn the lid over the needle. The intruding substance may

now be readily seen, and removed with a corner of a silk or cambric handkerchief.

It is often the case, that after the removal of the foreign body, the person still persists that it is there, as he says he feels it. This sensation is due to an irritation or roughening of the delicate membrane of the eye, and will disappear after a season of rest.

Fragments of lime or potash not unfrequently find their way into the eye. Being powerful alkalis, their action is quick and destructive, corroding or ulcerating the membrane. It is useless to attempt to pick out such a substance, as much time will be lost thereby; instead, immediately inject a few drops of diluted vinegar or lemon-juice, which will neutralize the alkali, and thus prevent its further destructive action. The eye should then be washed out with pure water. If by some accident an acid has gotten into the eye, a weak solution of soda, if instantly injected, will prevent serious injury.

It is a curious disposition of young children to thrust small bodies—such as kernels of corn, peas, pebbles, &c.—into the ear or nose, and, if not removed, they give rise to much trouble, from the parts becoming swollen and inflamed. Therefore, such bodies should be removed as soon as possible.

If a foreign substance has been forced into the nostril, the child should be made to take a full breath, close the other nostril with the finger, and the mouth with the hand, and the air forced violently out through the obstructed nostril. If this should fail to remove the substance, compression by the fingers should be made just above, to prevent it being forced upwards, when it may be readily removed by a proper instrument, or a bent wire.

Intruding substances in the ear should never be thus dealt with by inexperienced persons, as there is great danger of permanently injuring the organ. The head of the person should be held with the affected ear downwards, and a stream of warm or tepid water be injected. If the substance be not thus removed, it will be better to send for a surgeon. In rare instances insects crawl into the ear, causing acute pain, and great anxiety. Nature has provided means of protection against the frequent occurrence of this accident by rendering the waxy secretion of the ear extremely obnoxious to nearly all classes of insects. When such cases occur, the best mode of relief is to turn the person's head on one side, and fill the affected ear with sweet oil, glycerine, or water. This drowns the insect, and, in a short time, it floats to the surface of the liquid used, and may be easily removed.



POISONS.

In cases of poisoning, a slight knowledge of the different modes of action of the most common poisonous substances may be of great benefit, as such knowledge may readily suggest the necessary remedies or antidote. For instance, if we know that substances, irritative or corrosive in their nature, — such as acids, alkalies, arsenic, &c., — have a destructive influence upon the mouth, throat, and stomach, while other poisons, as opium, alcohol, and strychnia are taken into the stomach without injury, absorbed and taken into the blood, carried to the brain and nervous centres, and there produce their poisonous effects, we shall

see that the same means of relief will hardly answer in both cases. If an acid has been taken, an alkali will readily be suggested as being capable of neutralizing it and rendering it less hurtful. The new compound, although perhaps injurious, is less active in its effects, and consequently there is not so much need of haste in removing it from the stomach. Other poisons, when taken into the body, cannot be neutralized, in which case they must be *immediately* removed, and their effects counteracted.

As few persons have the necessary knowledge to enable them to act in all cases of emergency, we have spoken somewhat in detail of those poisons in common use, and liable to accidental swallowing, so that, in case of need, immediate reference may be made to the particular substance supposed to have been taken.



MINERAL POISONS.

ACIDS AND ALKALIES.—The acids and alkalies are violent corrosive poisons. Owing to the rapidity of their action, there is no time allowed for an emetic. The substance must be neutralized, and its corrosive action arrested immediately. If an acid has been taken, as muriatic, nitric, or sulphuric, a comparatively innocent alkali must be instantly administered. Lime-water, or common baking-soda dissolved in water, are usually at hand. If not, soap-suds may be given instead. Oxalic acid, largely used in the arts, and kept in private households to remove iron stains from textures and surfaces, is sometimes taken by mistake for epsom salts, which it closely resembles. Lime and

magnesia, by combining with the acid, form oxalate of lime or magnesia, which are insoluble in the stomach. If neither of these is at hand, a piece of the plastering of the wall may be torn away, dissolved in water, and administered.

If an alkali has been taken, — as ammonia, potash, or a concentrated preparation of lime or soda, an acid must be administered. Vinegar is readily procured, and should be given freely. Lemon-juice will answer the purpose equally well.

ARSENIC.— Arsenic, owing to its common use, is a frequent source of accidental poisoning. It is used in households to destroy vermin, and, under the name of Paris green, to kill insects. Many fly poisons contain it in large amount, and it enters into several medicinal compounds.

Arsenic acts as an irritant poison to the stomach and bowels; and when a poisonous dose has been ingested, speedy and energetic means must be resorted to. An emetic should first be given to dislodge the poison from the stomach. A teaspoonful of ground mustard may be mixed with a cup of water and administered at once, followed by a cup or two of warm water. Repeat the dose in a few minutes, if free vomiting is not produced. Mustard is not only useful as an emetic, easily procured and readily administered, but, owing to its stimulating property, it aids materially in counteracting the depressing influence of the poison upon the system. Vomiting may be facilitated by thrusting the finger, or the feather part of a quill, into the throat.

Milk, white of egg, or flour and water, should be drank freely. Not only do these substances promote vomiting, and tend to dilute the poison, but they offer

something upon which the poison can expend its energy, thus saving the living tissue until the whole mass is ejected from the stomach.

Much trouble is sometimes experienced in making the patient swallow. In this case the thumb of each hand may be slipped in outside, and close to, the gums, until the place is reached where there are no teeth. Through these spaces the thumbs should be forced between the jaws, when separation may easily be effected.

While the above is being done, a messenger should be despatched to the druggist's for the antidote to the poison, which, in case of arsenic, is the hydrated sesquioxide of iron. Two ounces of this should be procured, mixed with water until it forms a paste, and administered in doses of a tablespoonful every few minutes. As the preparation is quite harmless, there need be no fear of giving too much.

ANTIMONY. — Antimony, in the form of tartar emetic, is used as a medicine, and when kept in the house, is constantly liable to be taken accidentally. As it possesses emetic qualities, it produces violent retching and vomiting, which may be facilitated by drinking freely warm water, or thrusting the finger into the back part of the mouth.

The antidote is tannin, which forms, with antimony, an insoluble tannate of antimony. A teaspoonful should be dissolved in a little water, and administered as soon as possible. A strong infusion of green tea contains enough tannin to antidote the poison, if taken freely.

MERCURY. — Mercury is another irritant poison used in medicine, and consequently frequently taken in toxic doses. Corrosive sublimate, calomel, and red

oxide of mercury are the preparations most generally used, and consequently most frequently accidentally taken.

So rapid is the action of these substances, inflaming and destroying the coats of the stomach, that an emetic, unless almost instantly given, is of little service. White of egg, sweet oil, milk, or flour and water, should be taken in large quantities, by which, from the over-distention of the stomach, vomiting soon takes place. No antidote is known.

LEAD.—Poisoning by lead is of frequent occurrence. It may be occasioned by drinking water which has been allowed to stand in lead pipes, from eating food prepared in “glazed” vessels, or from the accidental ingestion of acetate of lead, or the white lead used by painters.

The antidotes are sulphuric acid, mixed with water until about of the strength of lemonade, sulphate of magnesia (epsom salts), and sulphate of soda (glauber salts), dissolved in water and administered freely. After the antidote has been given, vomiting may be produced by any of the before-mentioned means.

COPPER.—The most frequent cases of poisoning by copper result from the careless use of cooking utensils made from this substance. Acids form soluble salts when brought in contact with copper; and for this reason acids should never be used for cooking purposes in copper vessels. The ordinary vegetables and fruits are sufficiently acid to form poisonous compounds with copper. What is true of copper is true of brass, or other substance into the composition of which copper enters.

In case of poisoning from this substance, an emetic should be immediately given, followed by copious

draughts of milk, white of egg, or water. The antidote is said to be carbonate of soda (the ordinary baking-soda of the kitchen), of which as much as will lie upon a common nickel cent should be given every five minutes.

PHOSPHORUS. — Phosphorus is an ingredient of many “exterminators” for rats and other vermin ; and when kept in the house is liable to be accidentally swallowed. The ends of matches are often eaten by small children, when violent poisoning is the result.

There is no known antidote. An emetic should be immediately given, followed by large draughts of water or mucilaginous drinks.



VEGETABLE POISONS.

OPIMUM. — Opium, either in its crude state, or its preparations, — morphia and laudanum, — is, perhaps, the most frequent source of poisoning. It is a narcotic poison, exerting its influence upon the brain and nervous system, and through them interfering with the action of the heart and lungs.

At present there is no known antidote, using the term as understood by physicians. The treatment consists in immediately removing what is in the stomach, and overcoming the effects of that which has already been absorbed. An active emetic should first be administered, as lobelia or mustard. Owing to the insensibility of the stomach, from the action of the poison, some difficulty may be experienced in getting the emetic to act ; but the administration must be persisted in, assisted by tickling the inside of the throat with the finger or a feather.

If the patient has lost consciousness, and respiration is suspended, the clothes should be removed, and the neck and chest dashed with cold water. The surface must then be rapidly dried, and artificial respiration carried on by the means mentioned under the head of "Drowning," until natural respiration is established.

If the breathing is not suspended, but is going on at a diminished rate, artificial respiration is not required, unless the respiratory movements fall below five or six in a minute. In this case a stimulant, such as the aromatic spirits of ammonia, may be administered in twenty or thirty-drop doses in a teaspoonful of water, and repeated every two or three minutes. A few tablespoonfuls of very strong, freshly-made coffee is useful for the same purpose. Ginger or cayenne tea may be given, to sustain the vital action.

Respiration must be kept up, and the circulation kept free, in order to promote the dissipation of the poison from the nervous centres. This is to be obtained by muscular exercise. The patient may be walked up and down the floor, supported by a person upon either side, while a third supports the head. This may be done even while the patient is in an unconscious state. The same object may be effected by moving the limbs, the patient lying upon his back. Cloths wrung out in hot mustard-water may be wrapped about the extremities. Whipping the body by a towel wet in cold water will be found of great use. As soon as natural respiration is established, all operations should be suspended, and the patient allowed to sleep quietly. The utmost care and vigilance must be exercised, lest a return of the symptoms take place.

ACONITE. — This active poison is used as a medicine, and in many instances is kept in households as a domestic remedy. Its effects are active and violent, producing irritation of the stomach, and narcotizing the brain and nervous system.

When aconite has been taken in over-doses, an emetic should be instantly given; and as soon as vomiting has taken place, milk, white of egg, sweet oil, flour and water, or other mucilaginous drinks, should be administered freely.

If breathing has been suspended, artificial respiration must be resorted to, together with dashings of cold water, hot applications, and friction, and other means before mentioned.

BELLADONNA. — Unlike opium, belladonna, or deadly night-shade, produces active excitation of the circulation and the nervous system. The face of a patient who has taken an overdose of belladonna becomes red or livid; there is delirium, attended with violent muscular movements, hysterical laughter, &c.

The treatment is much the same as that mentioned for other narcotic poisoning. The poison should be immediately removed from the stomach by an emetic, after which milk, white of egg, sweet oil, or flour and water should be freely given.

STRYCHNIA. — Poisoning by strychnia (*nux vomica*) is by no means rare. So rapid is its action, and so violent its effects, that little can be done to relieve the sufferer. The effect of this poison appears to be expended upon the muscular system, the entire body being thrown into the most violent convulsions. There is one peculiarity in these convulsions which is always strongly marked, namely, the violent wrenching of the body backwards. This seems to be a peculiarity

of the action of strychnia. The patient is, in many cases, conscious all the while, and his sufferings are terrible.

Lobelia is a powerful relaxant, and seems to have the effect of counteracting the action of these narcotic poisons to a greater degree than any other substance. Consequently this emetic should be administered, if possible, to dislodge the poison, and continued until relaxation of the system is produced. Artificial respiration, and the other usual means, may be resorted to, with, however, little hope of success.

It will be noticed that, whereas nearly all the mineral poisons have an antidote, there is no antidote known for any of the vegetable poisons. Hence the greater danger of their use.

CHAPTER XXV.

CONCLUSION.

IN the foregoing pages we have endeavored to show that the solution of the problem of health lies within man's power, and that his redemption from the physical and moral ills of life is to be the result of his own personal endeavor.

That disease is the direct consequence of violation of the mandates of God, in the non-observance of physical and moral laws, cannot reasonably be doubted. It is probable that more than one half of the human race die in infancy or early childhood; and this, despite the influence of science and art, has been the condition of the human race for thousands of years; and how to remove the evil is still an unsolved problem. We have no evidence that man in his primeval state was subject to such suffering and premature death. We must therefore look for its cause in the spiritual and moral, as well as in the physical degeneracy of the race; in the depravity of our nature, and to the influence of evil habits, which seem to distort the moral sense of duty, and blunt the sensibility of everything pertaining to the higher life.

The violation of every law has its penalty, although that penalty may be obscure in its character, and seemingly tardy in its manifestation. The violation of moral law is sin, and the violation of physical law has

added to sin disease. Disease is, therefore, dependent upon the infraction of both moral and physical laws. By a law of our nature, indulgence in low conversation encourages corresponding vices in conduct. People who talk about mean and vile practices with a familiar tone, are very likely to commit such mean and vile acts when opportunity offers. It is by no means an uncommon thing for men of apparently correct lives to think and talk themselves into sensuality and crime. Bad language early runs into bad deeds. Persons who suffer themselves to converse in the dialect of any of our fashionable vices, soon find their morals lowered to the level of such vices.

This general degradation of the race is the result of the aggregate of individual wrongs and abuses. An individual may be a villain, and for a time enjoy apparently good health. But the human mind is so constituted that others catch the spirit. Evil thoughts soon develop into evil actions ; and moral wrong eventually leads to physical acts which involve the health of the body as well as of the soul.

The perfect health of a man is not the same as that of an ox or a horse. Let the mere animal organization of a man be the most perfect in respect to physical development and the performance of vegetative functions, and although he may appear in sound health, that health will fall far short of the development of a true man. As the physical demands sustenance, as the intellectual and preponderating capacity of man's nervous organization requires the stimulus of thought, so the spiritual nature demands a corresponding life. And until the development of all these different parts, perfect health — that nice adjustment of the physical, mental, and spiritual — can never be at-

tained. By the observance of physical laws the standard of health may be greatly elevated; but to regain that perfect condition of body and mind, to restore man to that high estate from which he fell, and develop anew all his pristine purity, will require an earnest faithfulness to duty, an adherence to the eternal principles of right, and the consequent development of that spiritual nature which renders man but "little lower than the angels."

But, it is said, man has fallen from this perfect state, and we find him in a condition of physical disease and moral degradation. How is he to be extricated from this situation, and elevated to bodily health and moral purity? The answer to this question involves an issue of the most momentous consequence to the human race; and yet the answer is apparent, and the indications plain. Nature acts by general, not by partial laws. We have seen that disease and suffering cannot be confined to individual sufferers; that whatever, either for good or ill, affects a part, must, in accordance with law, affect the whole. As are the individuals, so will the community be; and as each individual, by personal consideration of and attention to the laws governing his being, raises the standard of his own health and manhood, so will that of the community in which he lives, and consequently of the world, be elevated.

History furnishes examples, and gives us the key to the solution of the problem. By successive generations, the standard of health decreased, partly by acquired vice, and partly by hereditary descent, until a certain state of physical and moral degeneracy was reached, and then, by a revolution, the tide was turned, and reformation inaugurated. Gradually, as

the light afforded by knowledge and investigation spread, the race was elevated, but only again to retrograde. Thus, by alternate rise and fall, nations have developed high conditions of health and prosperity, and corresponding degrees of degradation and misery. We have seen that disease and immorality in one generation will inevitably perpetuate themselves in the next. On the other hand, health and virtue will, in no less measure, redound to the physical and moral elevation of the race.

The solution of the problem of health, then, obviously lies with us as a race. Not that the acme of health and human happiness can be reached through the endeavors of one or two generations; but each may do its part, each by attention to and fulfilment of the fundamental laws of our being, may transmit a higher order of life, and in posterity advance one step nearer to the solution of the problem.

To attain this end necessitates the fulfilment of the laws; first, the physical, which include the intellectual, and secondly, those governing the spiritual nature. By the physical, is meant those rules, the observance or non-observance of which directly influence the bodily health. We must eat regularly and temperately of good, wholesome food, that the nutritive functions may be properly carried on. We must breathe fresh air, avoiding all contaminations of that agent so vital to life. The necessary amount of sleep and exercise, both mental and physical, must be taken, avoiding all excesses, but observing temperance in all things. Shun all irregular or injurious habits, and the indulgence of depraved and perverted appetites. Observe cleanliness, and maintain the natural performance of all the bodily functions.

But the interpretation of the laws and principles which govern our spiritual nature is more obscure and difficult of comprehension by those whose higher nature has never received cultivation. This is the fault of education. We teach our children the material to the neglect of the spiritual ; we develop their physical and mental powers, strive to render them intellectual giants, and the perfection of animal beauty ; but the higher nature, the soul's life, by which we appreciate the good and the beautiful, that power by which we are brought into divine relationship with our Creator, is sadly neglected, both at home and at school, as well as in the daily affairs of life.

In this state of spiritual and moral degradation our worldly estimate of conditions and values must necessarily be by contrast. We see and deplore the defects and condition of those below us, but we fail to realize the joys of those who live upon a plane above us. Take the young men who have received their entire education in the streets, and whose associates are as ignorant as themselves : they can see no use or beauty in education ; they have no appreciation of science and culture ; they can see no reason why young men should spend their time in school trying to get an education. Graduates of our high schools and colleges, with enlarged capacity for intellectual enjoyment, with high culture and social position, have numerous resources for enjoyment entirely unknown to the more ignorant. And yet many of them are scarcely aware that they are possessed of spiritual natures ; while those whose higher natures have been developed, whose souls are acting in harmony with the spirit of God, have resources for happiness entirely beyond the comprehension of those whose intellects only have been enlightened.

This lack of spiritual culture is confined to no class, to no age, or station. We have men of talent, men who have developed their physical and intellectual powers, and become great in the estimate of the world, and yet who have sacrificed the better part of their being. Thomas Paine was a contemporary of George Washington, his superior in intellectual culture, and as good a patriot. But he neglected to cultivate his spiritual nature, and his name was soon forgotten, except by those who sympathized with his peculiar views. George Washington looked to the higher life, lived for God and humanity, and his name will ever live precious in the hearts of the people.

All nature, and all history, as well as our own consciousness, proves that man has a twofold nature; that he is at once an animal and a spiritual being; that he is both natural and supernatural; that he has a place in nature which science may demonstrate, and a place above nature which science can never reach—a spiritual nature, which belongs, not to the kingdom of nature, but to the kingdom of grace. Each nature lives according to its kind: the animal, by the gratification of its physical functions; the spiritual, by love and intimate communion with God. The scientist may weigh and analyze the physical, but the spiritual is entirely beyond the influence of his art. Scientific men only belittle themselves when they strive to analyze Christianity as a chemist would test the quality of any substance, or to weigh the divinity of the Saviour as though it were a ponderable element.

We believe in science, and wish to give to it all the glory its importance demands; but we do not like to see the physical exalted above the spiritual. Science is the companion of spirituality, but can never super-

sede it. Science relates to the external universe. It develops the intellect, but never satisfies the aspiration of an immortal being. Its study exalts and enlarges our conceptions, and fills the mind with wonder and admiration, and yet, with all its magnificence, falls infinitely short of that grander study which teaches of the soul of man and its relations to its Maker.

Plato, Socrates, and all the ancient men of renown, were never satisfied with the light of nature and of science. There would come welling up in the soul a longing for an inward happiness — for an immortality which science could never reveal. The same is true of all who have lived since that time. It is true of all who live to-day. The spiritual and religious nature of man was created for the worship and adoration of its Creator, and can be satisfied with nothing else. To a true Christian it is a sad spectacle to behold a man created in the image of God, and yet indirectly crushing out God's image by developing only the physical and intellectual — studying the science of earth, and neglecting the science of heaven and the worship of God. If we live only in the material, we shall have nothing to rest upon when the material fails, as fail it surely will. We live by our souls, and not by our bodies. Our bodies have no life of themselves; they are only the receptacles of life — tenements for the soul; and the time will come when these bodies will be unable to serve us. We must, therefore, all admit that philosophy of life which recognizes the great fact that our physical bodies are made to serve a temporary purpose, — a house for the spirit to dwell in for a time, — a place of education, — a place to get ready to be promoted to a higher and a better state of being.

In conclusion, we must be permitted to urge upon all the importance of perfecting their manhood, that when we have all completed our labors on earth, and worked out our portion of the problem of health and human life, we shall be judged worthy of promotion to that better land, not so much for our science and culture, as for our spiritual development—for our fitness for the society of Christ our Saviour and the angels of God in heaven. We may never be able to comprehend the mystery of God; but let us be true to his image in which we were created, and walk in the light, and never be confounded or led astray by the tendency of the age to cavil at mysteries we cannot understand.

We may not understand exactly how spirituality is a necessary concomitant to perfect health, and can only realize the fact as our higher nature is educated and exalted; but the fact is none the less true. The spirituality of man must be developed, and become the controlling element among all people, before the great problem of health and human happiness can be practically solved.





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